



Te Whare Whakakotahitanga Mo Te Hauora Taiwhenua

New Zealand Annual Rural Workforce Survey 2001



Martin London
Centre for Rural Health
2003

© Centre for Rural Health February 2003

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without the prior permission of the publishers.

PUBLISHER

Centre for Rural Health
Department of Public Health and General Practice
Christchurch School of Medicine and Health Sciences
University of Otago
New Zealand

ABOUT THE CENTRE

The Centre for Rural Health was established late 1994. It was funded (initially by the Southern Regional Health Authority, then the Health Funding Authority and finally by the Ministry of Health) for a series of projects to support rural health services and community involvement. The Centre was under the directorship of Martin London and Jean Ross from, respectively, rural general practitioner and rural nurse backgrounds. It was also known as the National Centre for Rural Health. The Centre closed in late 2002, with final publications being completed in 2003. The resources and reports created under the auspices of the Centre were uploaded mid 2003 to be available indefinitely.

AUTHOR

Martin London MB, ChB, Dip Obst, FRNZCGP

Director, Centre for Rural Health
Senior Lecturer in Primary Rural Health, Department of Public Health and General Practice,
Christchurch School of Medicine and Health Sciences, University of Otago
General Practitioner, Main North Road Medical Centre, Papanui, Christchurch

CITATION DETAILS

Please cite this work as follows:

LONDON Martin (2003) **New Zealand Annual Rural Workforce Survey 2001** Centre for Rural Health : Christchurch, New Zealand

Accessible from www.moh.govt.nz/crh

ISBN **0-9582475-1-X** (Internet)

Please note that as a consistent pagination protocol was applied when Centre for Rural Health documents were uploaded, page numbers in this web-based version may differ from earlier hard copy versions.

CONTENTS

CONTENTS	i
ACKNOWLEDGEMENTS	ii
EXECUTIVE SUMMARY	iii
THE SURVEY	1
Introduction.....	1
Aims of 2001 Survey.....	1
Methods.....	2
RESULTS.....	3
Shared Roster Areas.....	3
Practices.....	3
Frontline Clinical Workforce.....	7
Rural Nurses.....	6
Workforce Fluctuations.....	8
Workforce Within Shared Roster Areas.....	10
Populations.....	11
Doctors' Intentions to Leave in 2 Years and 5 Years.....	11
Origins and Destinations of Rural GPs.....	13
Rural Hospital Doctors.....	15
DISCUSSION.....	16
REFERENCES	
APPENDIX 1: Cover Letter & 2001 Rural Practice Profile Forms	
APPENDIX 2: New Zealand Rural Ranking Scale	

ACKNOWLEDGMENTS

I am indebted to many people in the preparation of this report.

Lyn Thompson, secretary at the Centre for Rural Health, has provided invaluable assistance in preparing and posting the surveys, collecting and collating responses, chasing up non-responders and in preparation of databases. Thanks too, Lyn, for your guidance in the effective use and development of these databases.

Karol London has meticulously corrected inaccuracies in the databases as new information became available and reformatted them several times to allow detailed analysis.

Many practice managers, nurses and rural GPs have tolerated several phone calls to help clarify the nature of services in their areas.

Thanks to the staff of all the practices who have continued to release and send information about their practices, either willingly or kindly hiding their annoyance at these further interruptions to their busy lives.

Dr Chris Skelly and Ron King of the Health Geoinformatics section at the Ministry of Health and Dr Jan Rigby and Anke Timmermann at Public Health Intelligence Applications Laboratory, Victoria University for their enthusiasm and help in preparing the maps of the Shared Roster Areas.

Dr Pat Farry, Dr Graeme Fenton, Kamiria Gosman, Dr Ron Janes, Dr Iain Hague and the staff of their rural support organisations for repeated help in clarifying details of service provision in their territories.

Floss Caughey at the Ministry of Health for support of the Centre for Rural Health during the time of this study.

Jean Ross for her partnership as a Director at the Centre for Rural Health.

Thank you all for, not only your practical contributions, but also the spirit and fellowship that you create in working together for rural health.

Martin London

EXECUTIVE SUMMARY

The methodology for the 2001 Annual Rural Workforce Survey allows a refinement on the previous surveys of 1995-99 and Year 2000 giving the most accurate workforce assessment as at December 2001.

100% survey return was eventually achieved

There are: (comparison with Year 2000 in brackets)

113 Shared Roster Areas (116)

12 SRA had 1:1 on-call rosters
23 SRA had 1:2 on-call rosters
17 SRA had 1:3 on-call rosters

209 Practices (212)

467 Rural General Practitioners (327 Full-time and 140 Part-time)
(= 387.4 Full Time Equivalent General Practitioners)

60 Rural Nurses contributing to 1st on-call medical cover
(= 34 Full-Time Equivalent Rural Nurses)

20 provide nurse-led service in remote locations
40 provide support to medical on-call rosters

TOTAL FRONTLINE WORKFORCE: 527 Practitioners (421.5 FTE)

Loss of GPs: 64 (= 53 FTE)

Gain of GPs: 72 (= 52.2 FTE)

NET GAIN IN WORKFORCE: 8 GPs (but a loss of 0.8 FTE)

The main net gain of 5 GPs (= 4.8 FTE) was in practices with Rural Ranking Scores of 70 or above.

3 new rural practices were formed. 5 rural practices closed. 4 practices merged with neighbours. 1 practice ceased to qualify as rural. 2 organisations present in previous surveys were excluded from this one.

Evaluation of populations within SRA awaits the completion of SRA boundaries.

Estimation of enrolled practice populations and tourist influxes await the formation of Primary Health Organisations in the rural areas.

Future Attrition

66 (= 14%) of the rural GP workforce have indicated an intention to leave in the next 5 years (38 of these in the next 2 years) This is almost certainly an underestimate.

Origins and Destinations

The origins of 55 (of the 71) recruits showed most to come from the United Kingdom (20) or urban general practice in New Zealand (14)

The destinations of 40 (of the 63) departees were predominantly to NZ urban practice (18) with 6 to the UK and 4 to Australia.

9 GPs transferred from one rural practice to another bringing the rural workforce fluctuation down from 13.5% - 15% (departures – arrivals) to 11.5% - 13%

CONCLUSION

A far more robust baseline database has been established for comparisons between years, estimations of workforce requirements and as a denominator for rural research.

There have been few marked changes in the rural workforce during 2001 and few environmental influences expected to achieve great change.

In contrast, 2002 has seen significant changes with:

- a new rural health action plan,
- extra funding dedicated to rural health
- effective rural locum schemes coming on line
- the development of Primary Health Organisations
- increases in community participation and inter-professional communication.
- a new commitment to rural based undergraduate clinical education

It will be important to note whether these influences show a response in stabilising and increasing the rural workforce, probably not in the current Rural Workforce 2002 Survey but perhaps in 2003.

NZ Annual Rural Workforce Survey 2001

INTRODUCTION

This report covers what is known of the rural frontline primary care workforce at the end of December 2001, and the workforce changes that occurred during that year. It follows two previous survey reports covering the years 1995-1999 (London, M., Feb. 2001) and the year 2000 (London, M., Oct. 2001)

Monitoring of the rural workforce in New Zealand serves the rural communities, the workforce and the health planning and funding authorities in a variety of ways. The overall aim is to have an adequate, effective and sustainable workforce to meet community health needs. This requires measurement of current practitioner – patient ratios, the desirable numbers for sustainable effective practice and the fluctuations of the workforce to estimate gains, losses and turnover. Turnover is as important as absolute numbers as it indicates the continuity of care from particular practitioners, the ease with which new workforce are recruited and the vulnerability of sustaining the workforce at adequate levels.

Another important function of workforce monitoring is to maintain accurate databases for effective communication, providing denominators for funding decisions and as base populations for research.

The importance of this has been borne out by the difficulty in obtaining accurate figures and the correct identities of rural workforce in our earlier surveys. This is gradually being refined in the more recently obtained rural practice profiles.

The 2001 Rural Practice Profiles are the most accurate yet. This coincides with a high level of accuracy obtained for defining the boundaries or rural primary care Shared Roster Areas. It is now possible for the workforce to be related to specific populations when applied to a Geographic Information System (GIS) mapping software.

AIMS OF 2001 SURVEY

The aims of the 2001 Rural Workforce Survey were:

- to obtain a ‘snapshot’ evaluation of the workforce as it was at the end of 2001
- to compare the state of the workforce with the survey for year 2000
- to demonstrate the fluctuations of the workforce during the 2001 year
- to anticipate future losses from the workforce
- to relate the workforce to the size and characteristics of rural populations
- to identify vulnerable and inadequately served rural areas
- to identify the origins and characteristics of new recruits to rural practice to inform recruitment initiatives
- to identify destinations and characteristics of practitioners leaving rural practice to suggest some causes of workforce losses and offer possible solutions to avoid further losses.

As an overall feature of the workforce description, there is the aim to create a systematic framework to which to refer when evaluating changes over time and in response to initiatives.

METHODS

The data derived from the previous two rural practice surveys was applied to create profiles of rural practices showing their contact details, the shared roster area to which they belonged, the other practices sharing that roster and the doctors and first-call nurses working in the practices. (See Appendix 1)

Each practice was sent its own profile by post, to be corrected and added to where appropriate. The following extra information was sought:

- when each doctor arrived in the practice
- which doctors had left the practice, their year of leaving and their destination
- which doctors had arrived in the practice during 2001 (to stay for at least 6 months: i.e. not short term locums) and from where they came
- the number of tenths worked by all the above doctors
- the intentions of any doctors to leave in the next 2 or 5 years
- the number and identity of rural nurses contributing to the 1st on-call roster and whether or not they had completed a PRIME course

Corrections to roster partnerships and information regarding the opening, closing or merging of practices were also sought.

Careful attention to clear layout and the fact that most of the pre-existing information was already loaded on the profiles was intended to ease the process of providing current information by the practices and lead to a higher response rate. Restricting the profiles to three pages and a fax-back facility supported this.

The first mailing of profiles was sent in late February 2002 with a covernote describing the results of the previous surveys and how the information might be used. This elicited approximately a 60% return. A second mailing was sent to non-responders with new copies of the profiles and a modified covernote describing the success of the first mailing and encouraging others to participate. The final 15-20% required more directive cajoling with phone calls to secure their returns.

Following the application of the new information to an Excel database, analysis revealed several gaps and anomalies. This required further triangulation with other databases (e.g. medical section of Telephone Books, MoH Rural Ranking Scores, databases of other Rural Practice Support Organisations) and numerous phone calls to practices to elucidate details and explain complicated shared roster arrangements.

The resulting information was returned to the Rural Practice Profiles to be ready for dissemination in January 2003 for modification according to workforce changes in 2002 to reflect the situation in December 2002.

The rural workforce database was manipulated to be able to present information according to individual practices, Shared Roster Areas, District Health Board territories or on a national basis.

Application to GIS

The rural practice database was passed to the Health Geo-informatics section of the Ministry of Health for application to the GIS Atlas of Shared Roster Areas to complete the relationships between workforce and rural populations.

RESULTS

20 miles to the north of Oxford (UK) are the Rollright Stones, a prehistoric stone circle, about 20 metres diameter, of some 70-plus stones. Tradition has it that however many times you try to count them, you cannot come up with a consistent number. From repeated attempts I have concluded that, with the large variation in their size and slight irregularities of position, it is hard to decide which are true members of the circle and whether you have counted any of them twice. However, the view over the Cotswolds is marvellous!

Counting rural GPs is much the same, but with the added complication that not only is it hard at times to define a rural GP but they move around and sometimes appear in two places at once. However, the view across the whole territory of rural health in New Zealand is quite clear enough!

SHARED ROSTER AREAS

113 Shared Roster Areas (SRA) existed at the end of 2001. This is 3 SRA less than in 2000 due to the following mergers:

Cheviot with Waipara
Whitianga with Pauanui/Tairua

The following SRA ceased to retain rural status:

Waipawa

PRACTICES

209 practices were identified fulfilling the criteria to score a minimum of 35 points on the Rural Ranking Scale (Health Funding Authority (1999) and Appendix 2). This is less than the 212 identified in the 2000 survey. It is partly explained by 5 practices having closed:

- Dr Scholtzl (Shannon),
- Drs Elley & Schell (Te Aroha)
- Dr Hewat (Gore)
- Dr David Yates (Marton)
- Dr Howard (Stratford)

4 practices having merged:

- Maple Court and Top Health (Kaitaia)
- Tendele/Kaponga (South Taranaki),
- Matamata Medical Centre and Matamata Health Centre,
- Drs de Beer and Jordaan Joined Avon M/C and Regan St. H/C (respectively)

1 practice ceasing to qualify as rural:

- Waipawa during 2001.

2 organisations being reclassified:

- McMahan Clinic (NZ Army – Waiouru)
- Dunstan Hospital (Rural Hospital)

3 new practices having been formed or previously omitted:

- Temuka Family Practice
- The Surgery, Whitianga
- Oawa Community Health Centre, Tolaga Bay

(The remaining discrepancy of 6 practices is probably the result of poorer quality data in the 2000 survey.)

FRONTLINE CLINICAL WORKFORCE

Within the practices were identified **467 General Practitioners (GP)** comprised of **327.5 full-time** and **140 part-time** GPs providing a total of **387.4 Full Time Equivalent (FTE)** services.

In addition there were **60 Rural Nurses** contributing to first on-call rosters providing approximately **34 FTE**.

This gives a **total frontline workforce of 527 and approximately 421.5 FTE practitioners**.

This compares with an estimated workforce for Year 2000 of 528 practitioners providing approximately 400 FTE.

The variance in these figures is not explained by recorded gain of workforce. **64 GPs (= 52.0 FTE) left and 72 (= 51.2 FTE) arrived** giving a **net gain of 8 (= -0.8 FTE)** GPs. However, the deficit may be explained by a number of changes:

- practices that have closed (see above)
- Excluding the McMahan Clinic at Waiouru, which is the responsibility of the NZ Army although they do help out with some aspects of primary care in the locality.
- Deleting the 4 Medical Officers of Special Scale (MOSS) at Dunstan Hospital (but providing a separate report on rural hospital MOSS).
- Some inaccuracies of definitions and recordings during the previous survey which should be largely refined out during the current and subsequent surveys

The core primary care rural clinical workforce is presented in Table 1. (Page 9) broken down according to District Health Boards.

Discussion

Throughout the country, changes in the workforce were marginal. Expressed as a percentage of the existing GP numbers, those DHB witnessing significant gains were Waitemata (12.5%) and Counties Manukau (13%) in the North Island and Nelson-Marlborough (14%) in the South Island. These have not traditionally been areas of particular concern having already fairly good practitioner-patient ratios and relatively low levels of deprivation. Where retention has been achieved, recruitment seems easy.

Expressed as FTE, the changes were smaller, 6%, 8% and 7.5% respectively. This supports the impression of more practitioners doing less than full time practice and this in itself being a positive factor for achieving workforce sustainability.

There is more cause to celebrate the GP gains in Bay of Plenty (9% with 3.5%FTE) and West Coast (15% with 16%FTE) where some stabilisation of the workforce in Opotiki and Westport has for the time being relieved localities of previous concern.

Wanganui (-12.5% GP and FTE) and Mid Central (-17%FTE) showed significant percentage losses but the figures tend to be magnified by small total workforce.

Table 1: The core primary care rural clinical workforce by DHB

DHB	No. of SRA	No. of Practices	No. of GP	GP FTE	Gains		Losses No. FTE		Net gn/ls No. FTE		Nurses 1 st call	
					No. FTE						PRIME	No-p
Northland	12	22	66	56.2	16	13.0	-17	-12.8	-1	0.2		
Waitemata	2	8	24	19.2	4	2.2	-1	-1.0	3	1.2		
Auckland	2	3	8	5.8	2	1.0	-2	-0.8	0	0.2	4	
Counties Manukau	2	4	15	12.0	3	1.4	-1	-0.4	2	1.0		
Waikato	15	32	76	62.4	6	6.0	-8	-6.2	-2	-0.2		
Bay of Plenty	6	12	27	22.9	4	2.7	-3	-3.0	1	-0.3	2	1
Gisborne	4	4	7	6.1	0	0	0	0	0	0	4	
Lakes	2	4	6	4.4	0	0	0	0	0	0		
Hawkes Bay	3	6	8	7.2	1	1.0	-1	-1.0	0	0	3	1
Taranaki	7	11	21	19.9	5	3.9	-4	-4.0	1	-0.1		
Wanganui	3	4	8	8	0	0	-1	-1.0	-1	-1.0	1	
Mid Central	3	6	14	10.7	1	1.6	-3	-3.0	0	-1.4		
Wairarapa	1	4	8	7.4	0	0	0	0	0	0		
Nelson-Marlborough	8	12	29	20.9	6	3.0	-2	-1.4	4	1.6	5	
West Coast	8	10	13	12.5	2	2.0	0	0	2	2.0	9	
Canterbury	9	15	37	25.9	4	1.1	-5	-3.2	-1	-2.1	8	2
South Canterbury	6	10	13	11.7	1	1.0	-2	-2.0	-1	-1.0		
Otago	12	26	52	46.4	8	5.7	-5	-4.1	3	1.6	9	6
Southland	8	16	35	27.8	7	6.6	-9	-9.1	-2	-1.5	5	
TOTAL	113	209	467	387.4	72	52.2	64	53	8	-0.8	50	10

RURAL NURSES

Some of the more remote regions of New Zealand have, for a long time, been served by Rural Nurses due to the very small populations being insufficient to support a doctor. In other areas, nurses have contributed to supporting health services where solo doctors required time off and had no medical colleagues to provide the cover. In some situations this role was foisted on the nurses by default when the doctor became unavailable. (Ross, J. 1996)

This model has now been developed more formally as a way in which nurses may help to sustain primary health care services to small populations through up-skilling and subsequent participation in emergency services and practical procedures. Doctors who were subject to 1:1 and 1:2 rosters are in some places able to live with more sustainable 1:3 or 1:4 rosters through the participation of these nurses.

The principal extra training for these Rural Nurses is the PRIME (Primary Response In Medical Emergencies) course. Many have completed this either as a stand alone event or as part of the Certificate or Diploma in Primary Rural Health Care.

The Rural Workforce Survey recognises this crucial contribution to sustainable rural services, which would be unappreciated if only the medical workforce was measured. However, the survey does not at this stage have the scope to evaluate the contribution of other nurses to rural primary health care services. This distinction is valid from a workforce planning perspective. Like rural GPs, the advanced trained rural nurses often have to be recruited from outside the area. They need the special training for these roles and experience many of the professional challenges and difficulties of rural GPs such as their need for locums, access to regular continuing professional development and the consequent difficulty of recruitment. In contrast, many of the other rural nurses have in the past emerged from the rural community as residents seeking part- or full-time employment without the pressures of having to guarantee a 24-hour service, and so have not presented a challenge to workforce planners. (Litchfield, M. & Ross, J. 2000)

The 2001 Rural Workforce Survey has evaluated the contribution of Rural Nurses to front-line first-on-call services. It has recorded:

- the sites where nurses are involved either as being the essence of the service or as providing a contribution to on-call rosters.
- The numbers of nurses involved at these sites
- The number of these nurses who have qualified through a PRIME course.

What has not been surveyed is the number of rural Shared Roster Areas where nurses provide a triage service, either personally or via telephone, as an aid to the doctors on-call at the time. This is being evaluated in the 2002 Rural Workforce Survey, currently underway.

Results

20 Rural Nurses provide nurse led rural primary health care services at 9 remote sites. (Table 2.) They are supported by a GP adjacent to each area who visits periodically to run clinics, is available for telephone back-up or is prepared to travel to help in serious emergency situations. 18 of these nurses have PRIME qualifications.

Table 2: Rural Nurse Led Primary Health Care Services

Location	PRIME TRAINED	NOT PRIME	Location	PRIME TRAINED	NOT PRIME
Great Barrier Island	3		Stewart Island	2	
Fox Glacier	1		Tokanui	1	1
French Pass	1		Harihari (Whataroa)	2	
Haast	1		Middlemarch (Outram)	6	1
Moana	1				

40 Rural Nurses participate in 1st on-call rosters for medical emergencies in 19 different practices. (Table 3.) 31 of these have PRIME training, 9 do not.

Table 3: Rural Nurse supported practices (for 1st on-call rosters)

Location	PRIME TRAINED	NOT PRIME	Location	PRIME TRAINED	NOT PRIME
Amuri (Rotherham)	3		Lumsden	1	
Hamner Springs	2		Murchison	4	
Great Barrier Island	1		Tolaga Bay (Oawa)	2	
Chatham Islands	3	1	Oxford	1	
Diamond Harbour	2	2	Raetihi	1	
Karamea	1		Ranfurly	2	1
Kurow		2	Reefton	3	
Te Araroa	2		Riverslea (Edgecumbe)		1
Te Kaha	2		Roxburgh	1	
W.Otago M/C (Tapanui)		2			

Discussion

The courage, dedication and skills of these rural nurses, particularly those serving communities largely on their own, deserves particular admiration. It must be recognised that they are especially vulnerable to burnout and require reliable and predictable locum relief and good access to personal and clinical supervision and continuing professional education.

Ensuring all nurses in these roles have a PRIME qualification should be a priority for the DHBs concerned.

The use of rural nurses is increasing and has the potential to create working environments that retain current medical workforce and to attract others. The impact of this may be evident in the 2002 Annual Rural Workforce Survey currently underway.

WORKFORCE FLUCTUATIONS

There are two basic aspects of workforce fluctuations:

1. The net gain or loss of workforce

This relates to the total supply of workforce giving an overall indication of whether efforts at *both retention and recruitment* are working. It may be measured against expected need with regard to:

- Acceptable Practitioner/Patient ratios (workload)
- Sufficient numbers in each locality (acceptable on-call rosters)

For this reason both total numbers of practitioners and the full time equivalent (FTE) workforce in each locality are measured.

2. The rate of turnover of workforce

This gives an indication of *retention rather than recruitment* which has implications on the one hand for workforce stability and continuity of care and on the other hand for the apparent ease with which replacements are found for departing practitioners.

Taking these two aspects together, the ideal is to see high overall gain with low fluctuation up to the point of sufficient workforce followed by a steady state of low turnover.

The fluctuations observed may then be further analysed according to different localities such as DHB, Shared Roster Area and Rural Ranking Scale. (Table 4.) What may appear to be an overall stable situation may obscure a drift to comfortable rural localities and increasing problems in traditionally 'hard-to-fill' practices.

TABLE 4: Gains and losses of GP workforce by Rural Ranking Scale (RRS) groupings of Shared Roster Areas (SRA) (excluding Rural Nurse led SRA)

RRS of SRA* (No. of SRA)	Gain GP	Gain FTE	Loss GP	Loss FTE	Net GP (No. of GP)	Net FTE
35 – 45 (37)	14	8.2	-9	-8.3	5 (219)	-0.1
50 – 65 (38)	12	7.6	-14	-13.1	-2 (179)	-5.5
70 – 100 (33)	5	5	0	-0.2	5 (66)	4.8
TOTAL (108)	30	19.8	22	-20.6	8 (464)	-0.8

Discussion

In estimating FTE, any practitioner working 8 tenths or more was considered to be full time. Because rural practitioners tend to do more on-call work, it is not unusual for them to have a whole day off per week while still being committed to well over a 40-hour week serving the community. Some practitioners evaluated their full-time work at 11, 12 or even 14 tenths – a reflection of the all-consuming nature rural practice can become, either out of necessity or inclination.

2001 saw a small gain (8) in numbers of doctors in rural New Zealand but no gain in workforce capacity (minus 0.8 FTE). The implication is that there were more part-timers contributing to the workforce. However, comparison with reported full-timers (310) and part-timers (188) from 2000 belies this impression. It may be explained by the improved methodology for deriving data during 2001 including the 100% survey response compared to 92% response in 2000.

The move to more part-time work has the distinct advantage of sharing on-call commitments and providing mutual cover for longer breaks. As being frequently on-call and the difficulty obtaining and paying for locums have been major factors threatening retention of rural practitioners, this observed change over 2001 may be an indication of greater workforce stability in coming years. However, the net gain is still small compared to the total workforce (1.7% for doctors) and along with the small workforce (FTE) loss (minus 1%) it is hard to draw firm conclusions. Compared to the estimated workforce shortfall of 80 – 100 FTE derived from the Year 2000 Annual Rural Workforce Survey, there can be said to have been little overall improvement in the situation.

Looking to a finer analysis of where, within the rural workforce, the gains and losses are evident there are a few more encouraging signs.

Table 2 shows that while the lower RRS Shared Roster Areas experienced little overall change, the middle bracket suffered a loss and the high RRS bracket a gratifying gain.

The gains in the more remote and smaller practices illustrate what can be achieved when political will is stimulated and specific action taken to address the more challenging problems. The previous problem areas of Opotiki, Westport, Roxburgh and the Chatham Islands have achieved some stability.

The middle ground losses indicate areas of concern and raise the question of whether the rural ranking scale is reflecting the retention and recruitment realities of some of these areas.

Workforce Fluctuation

The turnover of rural GPs indicated a gain of 72 (= 15.4%) and a loss of 64 (= 13.7%). However 9 of these transferred from one rural practice to another so were not a true loss or gain to the total workforce. These reduce overall flux to 13.6% (gain) and 11.8% (loss) yet they do still represent a change in continuity of care for the practices concerned.

How this compares with other industries and what might be considered to be an acceptable workforce turnover has not been pursued. These figures mainly have value as the basis for comparison between years of the surveys. In year 2000, 53 (= 44 FTE) practitioners arrived and 48 (no FTE data) departed. The denominator for this group was estimated at 528. This is so far at variance with the 2001 figure, due to probable overestimate of the workforce in 2000 that it is unhelpful to express these as percentages.

WORKFORCE WITHIN SHARED ROSTER AREAS

The Shared Roster Area (SRA) is an important unit as:

- The practitioners within it are interdependent with regard to on-call rosters and workloads, such that loss of practitioners from one practice has an impact on all the others in the SRA.
- It enables a relationship to be made between a defined population and the workforce serving it.

It is therefore possible to comment on the likely sustainability of the service, or the workforce stability of a SRA in terms of the on-call roster and the patient load.

The document “The Implementation of the Primary Health Care Strategy in Rural New Zealand” (Ministry of Health, 2002) identifies acceptable rural practitioner-patient ratios as 1:1200 and acceptable on-call rosters as no more demanding than 1:4.

Rosters

At the end of 2001 there were:

- 12 SRA with on-call rosters of 1:1 for weekends**
- 23 SRA with on-call rosters of 1:2 for weekends**
- 17 SRA with on-call rosters of 1:3 for weekends**
- 21 SRA with on-call rosters of 1:4 for weekends**
- 129 SRA with on-call rosters of over 1:4 for weekends**

6 Nurse-led SRA operating 1:1 or 1:2 Rosters

Thus 58 SRA exceeded desirable rosters for weekend cover. Most of the 1:1 and 1:2 rosters reflect the situation in small remote communities. 15 of these are in the North Island and 20 in the South Island including the Chatham Islands. A few places have onerous rosters due to difficulty getting doctors to the localities (Opotiki, Taumaranui, Darfield, Oxford) while others suffer from poor relationships between practitioners precluding effective sharing of rosters.

Most areas on 1:3 rosters would require extra funding to support a fourth practitioner due to too low a population to provide an economic base.

Vulnerable SRA

A number of Shared Roster Areas remain vulnerable with an unstable workforce. In the North Island, The Bay of Islands, Waihi and Wairoa stand out as having lost several doctors and serving both deprived populations and having to cater for tourist influxes.

In the South Island, Kaikoura, Darfield, Waimate, Gore and Winton suffered losses with significant pressure being borne by those remaining, so threatening their retention.

Future influences on on-call rosters

Specific focus during 2002 on relieving onerous on-call rosters is likely to see most of the 1:1 to 1:3 rosters removed. In the more remote places this is likely to be achieved through recruiting weekend locums without increasing the resident workforce. Relief of rosters in those places with heavier workloads could improve the circumstances there to encourage retention of current practitioners and recruitment of others to achieve a real increase in the rural full-time equivalent workforce.

POPULATIONS

The populations obtained for the previous rural survey were based on crude estimates taken from Census Area Units relating to but not coinciding with approximate boundaries of SRA. Practitioners were invited to change these populations if they had access to other data sources, but the modifications were invariably upwards and not always on a firm basis. The lack of consistency between population estimates for different SRA renders this part of the analysis temporarily invalid.

The next stage of this part of rural practice profiling is to define SRA census based populations. This has been delayed by the time taken for the draft SRA boundaries to be applied to a Geographical Information System (GIS) format. The boundaries have now been mapped and the drafts are to be sent to the rural practices for confirmation of details in February 2003. The confirmed boundaries, adjusted to coincide with the nearest census mesh-blocks, will allow definitive resident populations to be related to the current practice profiles and to the 2002 profiles currently being surveyed.

It is recognised that the resident populations are only an approximation to those utilising a particular set of health services and further confounded in those areas with high influxes of tourists. Ultimately, with the establishment of Primary Health Organisations, the practitioner-patient ratios may be derived from formal patient enrolment and from the direct monitoring of visitor uptake of services in tourist areas.

DOCTORS' INTENTIONS TO LEAVE IN 2 YEARS AND 5 YEARS

Anticipating attrition of the rural workforce is an imprecise art based on stated intentions of the workforce and the age of practitioners.

Stated intentions are inaccurate due to some practitioners having unclear plans and others being coy about divulging what may be sensitive information. To this one may add those who fail to read or complete surveys accurately.

An impressionistic view of the retiring ages of former rural GPs indicates that each decade has its share of retirees and some rural doctors remain practicing well into their seventies. Thus, anticipating retirement from rural practice on age alone approximates to guesswork.

The 2001 survey sought the retiring intentions of rural GPs (from *rural* practice) asking them to indicate their intention to leave within 2 years or 5 years.

Results

A very conservative estimation of anticipated workforce rural attrition suggests a 14% intention to leave over the next 5 years. (Table 5.) (Personal knowledge of several practitioners not on this list who have already left indicates how inaccurate such prognostications are.)

Table 5. Anticipated rural workforce attrition by DHB

DHB	Drs leaving 2 yrs		Drs leaving 5 yrs		TOTAL	
	No.	FTE	No.	FTE	No. (total w/f)	FTE
Northland	3	2.5	3	3	6 (66)	5.5
Waitemata	2	1.1			2 (24)	1.1
Auckland	1	1	3	2.2	4 (8)	3.2
Counties Manukau	1	0.7			1 (15)	0.7
Waikato	7	4.8	3	2.6	10 (81)	7.4
Bay of Plenty	5	4.5			5 (22)	4.5
Gisborne			2	1.1	2 (7)	1.1
Lakes			2	1.7	2 (6)	1.7
Hawkes Bay			2	2	2 (8)	2
Taranaki			2	2	2 (21)	2
Wanganui						
Mid Central			1	1	1 (11)	1
Wairarapa						
Nelson-Marlborough	2	1.6			2 (29)	1.6
West Coast	1	1			1 (13)	1
Canterbury	7	4	6	5.2	13 (37)	9.2
South Canterbury	2	2	2	1.5	4 (13)	3.5
Otago	5	3.7			5 (52)	3.7
Southland	2	1.3	2	2	4 (35)	3.3
TOTAL	38	28.2	28	24.3	66 (464)	52.5

Discussion

Expressed as a percentage of existing rural workforce in each DHB the following DHB have potential gaps developing in their localities:

Table 6. DHB vulnerable to significant loss of rural workforce.

DHB	No. GP (total w/f)	FTE (total FTE)	% GP loss	% FTE loss
Auckland	4 (8)	3.2 (5.8)	50%	55%
Bay of Plenty	5 (22)	4.5 (18.6)	22.5%	24%
Lakes	2 (6)	1.7 (4.4)	28.5%	18%
Hawkes Bay	2 (8)	2 (7.2)	25%	27%
Canterbury	13 (37)	9.2 (25.9)	35%	35.5%
South Canterbury	4 (13)	3.5 (11.7)	30.5%	30%

It needs to be remembered that these are probably under-estimates. Particular efforts at retention in these areas may modify some of these intentions or at least improve the prospects of successful recruitment.

ORIGINS AND DESTINATIONS OF RURAL GPs

Monitoring from where rural practitioners tend to be recruited and to where they go on departure may offer useful clues for promoting retention and recruitment.

Questions about their origins and destinations were completed on behalf of 56 of the 72 new rural practitioners and 41 of the 64 departees. To this we add the information about 3 retiring doctors whose practices closed and so did not provide a return and 7 others who went to rural practices as evidenced in the 'arrivals' but failed to be nominated among the 'departures'.

Origins of Arrivals in 2001

From within New Zealand

Urban General Practice	13
Other Rural Practice	9
Urban Hospital	1
Small Hospitals	4
TOTAL	27

From Overseas

United Kingdom	20
South Africa	5
Australia	1
Other	3
TOTAL	29

Destinations of Departing Rural Doctors

Within New Zealand

Urban General Practice	19
Urban Specialty	1
Other Rural GP	9
Maternity	2
Sick leave	2
Retirement	6
TOTAL	39

To Overseas

United Kingdom	6
Australia	4
Other Countries	2
TOTAL	12

Discussion

It appears that the UK is the most promising source of rural workforce for New Zealand and that we gain from there more than we lose in return. It remains the most useful focus of any marketing rural communities may wish to engage in and has the additional advantage of traditionally being above New Zealand on the 'feeding chain' of professional migration. Advertising in the UK therefore complies with the agreements of the Commonwealth Ministers of Health. (Ref.)

While the destination of most doctors was urban general practice it may be encouraging to see how many found other rural locations in which to work. This may indicate a greater degree of rural workforce stability than the raw total entries and departures suggest. It reduces the turnover from 13.7% - 15.4% (departures – arrivals) to 11.8% - 13.6%.

Four doctors went to Australia versus one who chose to come to New Zealand. In Australia there are strong incentives for rural practitioners, partly financial but also an increasing focus on the needs of practitioner families. (Rural Medical Family Network.) The concern about this has been highlighted in a recent paper and editorial in the New Zealand Medical Journal (Hill, Martin & Farry 2002; London 2002)) and putting some of the new resources aimed at retention of rural workforce to address family needs requires urgent research and practical action.

RURAL HOSPITAL DOCTORS

The inclusion of rural hospital doctors in previous workforce surveys has been somewhat inconsistent. These are Medical Officers of Special Scale (MOSS) who are responsible for in-patient care at small country hospitals – i.e. those hospitals which do not have continuous surgical or anaesthetic facilities. Many country hospitals do not have MOSS, as the inpatient care is carried out by the local GPs.

Primary or Secondary Care?

Whether the MOSS represent part of the rural primary care workforce may depend on whether the activities within the hospital are considered to be *primary* (albeit ‘extended primary’) or *secondary* care. From the perspective of integrated rural services it may be better to think of them as primary care. However, from a funding point of view they have traditionally been financed from secondary care budgets.

In spite of their predominantly primary care function, some communities and their Primary Health Organisations (PHO) may be reluctant to take them over due to realistic concerns about inadequate funds being attached to the transfer of responsibility. There is a saving to DHB through having patients in low cost rural beds rather than higher cost, city based beds. The DHB are also able to attach the running of rural hospitals to the global administrative, maintenance and bulk supply capabilities of their provider branches. The DHB also has some capacity for cross subsidising the cost of running the small hospitals, which should be less than the savings achieved through use of the rural beds. This capacity would be denied to Rural PHO making them more expensive to run and a potential financial liability to PHO.

This issue is quite separate from the enormous social value to remote communities of having observation and in-patient beds close to whenua and whanau.

In previous surveys, the MOSS at Dunstan Hospital were included while those elsewhere have not been. For the 2001 report, these MOSS have now been excluded. A separate report on rural hospital workforce is being sought based on information from Dr. Pat Farry, South Island Director of Rural Health and the North Island Institute of Rural Health.

DISCUSSION

Survey Methods

Previous workforce evaluations were based on practices filling in blank surveys.

The first of these involved a retrospective survey of the changes of practitioners over the previous five years. The survey was inevitably fairly complicated, partly dependent on memory and had to be limited in the scope of information sought. It was difficult to get a full return from all identified rural practices.

The second survey of year 2000 was also based on completion of blank forms but this sought information about only a single, current year and so afforded more detailed enquiry. It enabled identification of groups of practices sharing rosters and allowed a degree of triangulation between the replies of practices. This threw up many anomalies requiring more direct enquiries but leading to a clearer picture of the workforce in less familiar areas.

It also enabled the defining of Shared Roster Areas, which is a more robust base on which to evaluate workforce requirements and to facilitate future survey work. It has led to the development of an Atlas of Rural Health in New Zealand providing a rural health population profile.

The 2001 Annual Rural Workforce Survey was the first to present existing data on rural practices for correction and so resulted in a higher immediate response rate enabling follow-up contacts to achieve 100% return and access to finer detail about the full time equivalent workforce and its fluctuations.

Survey Results

The 2001 Survey has not thrown up any startling results. In spite of an 11.5% - 13% workforce turnover there has been no significant increase in total workforce to address the estimated 80 – 100 practitioner shortfall in requirement.

Finer detailed analysis than has previously been done shows a few DHB have experienced a disproportionate share of gains or losses while others may have to pay special attention to potential losses.

The greatest gain from this survey is the creation of an increasingly robust database on which to base future workforce fluctuations. However, this may also be complicated by further changes in definition of rural practices due to possible modifications of the Rural Ranking Scale. Another confounding factor will be the changes in Rural Ranking Scores for those practices who are being relieved of onerous rosters through use of subsidised weekend locums. This need not preclude useful comparisons being possible.

Any gains in workforce stability during 2001 might be expected to reflect initiatives over the previous year. From the static state of total workforce, it seems that there were no major initiatives having any overall impact. However a few focused efforts may have reaped benefit such as the sustaining of the Rural Practice Support Scheme in Oxford, North Canterbury and the use of a rural nurse to support the on-call roster there.

In Westport, continuation of sufficient guaranteed minimum incomes for GPs and DHB participation in running the service has created an increase in workforce, which currently seems stable. Roxburgh also makes creative use of rural nurses sharing call, which has attracted more medical staff.

Working against such initiatives are the global shortage of GPs and the more lucrative positions overseas for rurally inclined GPs. The loss of four to Australia may be a reflection of this.

During 2002 significant environmental changes have occurred for rural practice in New Zealand.

- Following the delivery of a rural health action plan “The Implementation of the Primary Health Care Strategy in Rural New Zealand”, substantial funding has become available aimed primarily at retention of rural workforce and, in particular, at relief of on-call rosters busier than 1:4.
- The move towards Primary Health Organisations (PHO) had stimulated greater dialogue between rural health providers amongst themselves and with their communities. The potential gains from PHO establishment are likely to be more evident in rural areas where community participation has a greater potential to influence workforce retention than in urban areas.
- A nationally based subsidised rural locum recruitment scheme run by the New Zealand Rural General Practice Network Inc. began to bring its first locums into New Zealand and, during the year, has increased the flow of locums and the fluency of its operation.
- A more concerted effort to move undergraduate clinical education into rural practices is underway and this may have further impact on the rural environment in years to come.

While the effect of these changes may be delayed a year or two, it will be interesting to see whether the 2002 Survey shows any sign of stabilisation in response to immediate benefits and anticipation of better times to come.

References

1. Commonwealth Secretariat (2002) "*Commonwealth code of practice for international recruitment of health workers.*" HMM(G)(02)4 (Supplement 1a), London, April 2002
2. Health Funding Authority (1999) "*Variation of Advice Notice Pursuant to Section 51 of the Health and Disability Services Act 1993, pursuant to Clause 7 of Part A of the Advice Notice.*"
3. Hill D, Martin I, Farry P. (2002) "*What would attract general practice trainees into rural practice in New Zealand?*" NZ Med J 2002
4. Ministry of Health (2002) "*Implementation of the Primary Health Care Strategy in Rural New Zealand*" Report from the Rural Expert Advisory Group to the Ministry of Health. Wellington 2002)
5. Litchfield, M. & Ross, J. (2000) "*The Role of Rural Nurses – National Survey*" National Centre for Rural Health. September 2000
6. London, M (2001) "*New Zealand Annual Rural Workforce Survey 2000*" National Centre for Rural Health. October 2001
7. London, M. (2001) "*Rural General Practitioner recruitment and retention in New Zealand*" Centre for Rural Health, Dept. Public Health and General Practice, Christchurch School of Medicine, University of Otago. October 2001
8. London, M. (2002) Editorial: "*Incentives for Rural Practice.*" NZ Med J 2002
9. Ross, J. (1996) "*Rural practice Nurse Skills Project (SRHA)*". Centre for Rural Health, Dept. Public Health and General Practice, Christchurch School of Medicine, University of Otago
10. Rural Medical Family Network (website): <http://www.rmfn.org.au/site/services.cfm>

APPENDIX 1

Cover Letter and 2001 Rural Practice Profile Forms



Rural Practice Profiles - 2001

Dear Rural Practice

ANOTHER 5 MINUTES OF YOUR TIME?

Last year you contributed to the Annual Rural Workforce Survey 2000. We had a 92% return giving some pretty robust data, which has fed directly into the rural health plan being prepared by the Ministry of Health. We now know that at that time there were:

- 116 rural shared roster areas**
- 212 practices with 35 points or more on the RRS**
- 310 full time and 188 part-time** (averaging 0.4 FTE) GPs

Total rural workforce of **c. 528** contributing **400 full-time equivalents** (if we estimate and add in those 8% non-returns).

During year 2000, **53 new GPs** entered rural practice and **48 departed**. While this seems encouraging, the main gains were in the less remote practices, the remote gains were related to the Rural Practice Support Scheme which is due to finish in December 2001 and the net gain of 5 practitioners is less than 10% of the current deficiency in rural workforce. **There is still plenty of work to do!!!**

What we need now to further fortify our case with the Ministry of Health is up-to-date accurate information about:

- **the numbers of rural practitioners**
- **Recruits and losses to the workforce**
- **Where rural GPs come from**
- **Numbers contributing to on-call rosters (i.e. GPs & PRIME trained Nurses)**
- **the Full Time Equivalent workforce**
- **A forecast about rural GP retirement**
- **Where rural GPs go to**

We have recorded the information we have about your practice on the attached pages. **Please would you check it for accuracy, correct where appropriate and fill in whatever gaps there are for which you have information.** *(PLEASE READ THE FORM CAREFULLY. WE HAVE TRIED TO MAKE IT AS CLEAR AS POSSIBLE.)*
(We appreciate the information on anticipated retirement is potentially sensitive. If so, please leave it blank. If you were happy to communicate your intention to leave in a more discreet manner we'd like to hear from you.)

Thank you very much again for your participation in this important work.

With best wishes

Martin London

(Director, National Centre for Rural Health)

RURAL PRACTICE PROFILE

*Please correct any inaccuracies and/or add to blank spaces on this page
and answer the question, if appropriate*

SECTION 1: Shared Roster Area

SHARED ROSTER AREA NAME:

Rural Ranking Score/s:

Pop. *(1996 census):*

On-call Roster:

Weekdays:

Weekends:

Practice/s in Roster:

Prac.1

Prac.2

Prac.3

Prac.4

Question:

Have any practices in your shared roster area opened, closed or merged?

SECTION 2: This Practice

PRACTICE NAME:

Address:

Contacts:

Phone:

Fax:

E-mail:

On Call Roster:

Weekdays:

Weekends:

Rural Ranking Score:

SECTION 3: Practice Workforce

DOCTORS: CURRENT MEDICAL WORKFORCE

- Action:** Please:
1. Check/correct names and show tenths worked
 2. Cross out any doctor who has left the practice and state year of departure and destination

DOCTORS IN THIS PRACTICE

Name	Tenths	Yr Arrived	Year Left	Destination

*Please mark * any GP intending to leave within 2 years*
*Please mark ** any GP intending to leave within 5 years*

NEW ARRIVALS IN 2001

- Action:** Please identify doctors who have joined the practice during 2001 intending to stay for at least 6 months, including the tenths they work:

Doctors Joined in 2001	Tenths Working	Previous Employment & Country

NURSES – see next page



RURAL NURSES

We are trying to establish the contribution of nurses to the on-call rural workforce

Action: Please identify the nurses (practice nurses, district nurses, hospital nurses) who provide 1st on-call cover in your locality

Nurses' Names	Designation (PN? DN? HN?)	PRIME Trained?		Source of Medical Back-up
		Yes	No	

NOTE: A PRIME trained nurse will have been through the 5-day PRIME training course on emergency care run by St Johns on behalf of ACC and the Ministry of Health

SECTION 4: Other Features of the Service

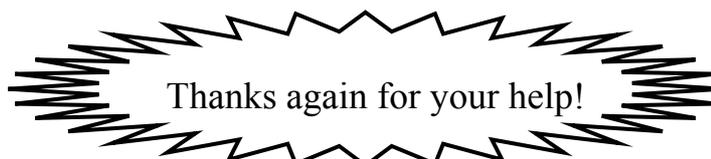
Special Local Arrangements: *(please describe as appropriate and add any other comments - e.g., long term locums in locality, etc.)*

.....

.....

.....

.....



Please fax to 03 364 3632

(or post to address at foot of letter)

APPENDIX 2



**New Zealand
Rural Ranking
Scale**

RURAL RANKING SCALE

Name..... Date.....

Practice Address

- Please ring the number of points you are claiming under each heading.
- Refer to definitions under each section.
- Note that all travelling times refer to one-way journeys by car in normal daytime conditions travelling within speed limits.

1. Travelling Time from the Surgery to Major Hospital (see below for a list of these hospitals)

Major hospital within 30 minutes	0
Major hospital within 30-45 minutes	5
Major hospital within 45-60 minutes	10
Major hospital over 60 minutes away	15
No major or peripheral hospital within 60 minutes	20

Distance from Surgery to Major Hospital (km)_____

2. On Call Duty

1 in 6	10
1 in 5	10
1 in 4	10
1 in 3	20
1 in 2	30
1 in 1	40

- The on call duty is calculated on the number of General Practitioners available to take part in an on call service. This does not include locums.
- In a town where there is more than one on call service the total number of General Practitioners in the town is the number available to take part in an on call service. For example in a town with two practices, one with three doctors doing a 1 in 3 on call and another practice with two doctors doing a 1 in 2 on call, the total number of General Practitioners available to take part in an on call service is five.
- If General Practitioners agree that a local colleague need not do call because of poor health that General Practitioner is considered as not being available to take part in the on call service.

3. On call for Major Trauma

Not on call for major trauma	0
On call, but with double-crewed road ambulance with at least one paramedic (at all times) available within 30 minutes	5
On call, with other ambulance arrangements	15

This item reflects the back-up available for rural GPs in emergencies, and the likelihood that one may need to accompany the ambulance.

4. Travelling Time to Nearest GP Colleague

0-15 minutes	0
15-60 minutes	5
over 60 minutes	10

Distance to nearest GP Colleague at work (km) _____

- *This includes partners in your own practice and other GPs in your town.*

5. Travel Time to Most Distant Practice Boundary

under 30 minutes	0
30-60 minutes	5
over 60 minutes	10

- *You must be the CLOSEST doctor to that boundary, but you may include the area covered when on call.*

6. Regular (at least once monthly) Peripheral Clinics

No	0
Yes	5

- *This item has been included to recognise increased costs of running peripheral clinics away from the base surgery.*

TOTAL POINTS

7. Discretionary Points

The HFA may, at its discretion, award additional points to GPs in areas where the recruitment and retention of GPs is difficult. No GP may have a score of greater than 100 points.

In order to apply to the HFA for discretionary points please tick the box
This will be followed up by the Senior Locality manager for your area

**PLEASE TICK IF YOU OBJECT TO THE INFORMATION YOU HAVE
RECORDED BEING MADE AVAILABLE TO THE RURAL GENERAL
PRACTITIONER NETWORK INC.**

Signature: _____

Date: _____