

TE WAI ORA



**Nelson Marlborough
District Health Board**

NOTICE OF MEETING

OPEN MEETING

**A meeting of the
Community and Public Health Advisory Committee
of the Nelson Marlborough District Health Board
will be held on 26 October 2010 at 12.30 p.m. in the
Nelson Seminar Centre Room 1
Braemar Campus, Waimea Road
Nelson**

Note: If you would like to join the meeting by videoconferencing from Blenheim, please call (03) 5461235 at least 24 hours prior to the meeting.

AGENDA**12:00 CPHAC Lunch (public excluded)****PUBLIC FORUM – 12:30 p.m.****OPEN SECTION – 12:40 p.m.**

- 12:40 p.m. Karakia (Judith Holmes) and welcome (Chair)
- SECTION 1: **Apologies**
- SECTION 2: **Registrations of Interest**
- 12:45 p.m. SECTION 3: **Minutes**
- From previous meeting
 - Matters Arising
- SECTION 4: **Correspondence**
Nil received
- 12:55 p.m. SECTION 5: **Monitoring Reports**
- Chair
 - Te Roopu Tupu Tahī
 - GM Planning and Funding
 - Director of M ōri Health
 - GM Primary and Community
 - Members' Reports
 - Members' Issues
- SECTION 6: **Government Priorities**
Nil to update
- 1:30 p.m. SECTION 7: **For Discussion:**
Meeting Frequencies 2011
- 1:45 p.m. SECTION 8: **For Presentation:**
2010 Health Needs Assessment
- 2:45 p.m. Committee roles and reporting relationships with the new ELT directorates

(continued next page)

3.15 p.m.

Public Excluded Meeting

RECOMMENDATION

THAT the committee resolve itself into a committee of the whole and that in terms of the NZ Public Health and Disability Act 2000, the public be excluded while the following items are considered:

- **Minutes of a meeting of committee members held on 31 August 2010 (Clause 34 (a) Fourth Schedule NZ Public Health and Disability Act 2000)**

3:30 p.m.

Closing Karakia

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1 APOLOGIES

Nil received

2 REGISTRATIONS OF INTEREST

1) Committee Members (as of 15/10/10)

Name	Existing – Health	Existing – Other	Interest Relates To	Possible Future Conflicts
John Moore	<ul style="list-style-type: none"> Nil 	<ul style="list-style-type: none"> Member Nelson Regional Land Transport Committee Trustee Top of the South Athletics Charitable Trust. 		
Liz Richards	<ul style="list-style-type: none"> Chair of the Upper South A Regional Ethics Committee 	<ul style="list-style-type: none"> Member of Nelson Labour Electorate Committee. Deputy Chair Tasman Bay Heritage Trust. 	<ul style="list-style-type: none"> Health Research. 	
Jenny Black	<ul style="list-style-type: none"> Life member of Diabetes NZ. 			
Judy Crowe	<ul style="list-style-type: none"> Chairperson of Nelson Marlborough Hospitals' Charitable Trust. 	<ul style="list-style-type: none"> Member of the Gladys Amelia Pascoe Trust 	<ul style="list-style-type: none"> Provision of trust funds towards equipment, training and patient support. 	
Judith Holmes	<ul style="list-style-type: none"> Partner works for Child and Adolescent Mental Health Services (CAMHS). NMDHB representative on the Mapua, Ruby Bay and Moutere District Health Centre Inc Board 			
Lorraine McMath	<ul style="list-style-type: none"> Director of Wellbeing Works Ltd. 	<ul style="list-style-type: none"> NMDHB representative on Marlborough Regional Land Transport Committee 		<ul style="list-style-type: none"> Husband is Director of Construction Coatings and has been contracted for work with Wairau Hospital redevelopment.
Sonny Alesana	<ul style="list-style-type: none"> Nil 			

Name	Existing – Health	Existing – Other	Interest Relates To	Possible Future Conflicts
Suzanne Win (ex- officio)	<ul style="list-style-type: none"> ▪ Director of Split Ridge Associates Ltd that provides consultancy services to health & disability organisations ▪ Trustee of Gracelands Group ▪ Member of DHBNZ Chairs Executive with lead responsibility for workforce and participant on Tripartite Forum ▪ Partner is a part-time employee of NMDHB Provider Division. 		<ul style="list-style-type: none"> ▪ Provision of consultancy services to health and disability organisations for DHBs or Ministry of Health. 	Partner is <ul style="list-style-type: none"> ▪ Member on PHO Alliance Executive ▪ Chair of West Coast PHO ▪ contracted to MOH to coordinate the implementation of the Cardiac Network ▪ Chair of the Board of Access Home Health Ltd ▪ Director on Management Board of Jack Inglis Friendship Hospital.

2) Strategic Leadership Team Members (as of 15/10/10)

Name	Existing – Health	Existing – Other	Interest Relates To	Possible Future Conflicts
Denise Hutchins	Nil		<ul style="list-style-type: none"> ▪ Certification/Accreditation. 	
Heather McPherson (Acting CMA)	Nil			
Harold Wereta	<ul style="list-style-type: none"> ▪ Ngati Toarangatira Connections 		<ul style="list-style-type: none"> ▪ Tribal Interest 	
John Peters	<ul style="list-style-type: none"> ▪ Director of SISSAL ▪ Trustee of Nelson Marlborough Hospitals' Charitable Trust ▪ Trustee Churchill Trust. 	<ul style="list-style-type: none"> ▪ Director of Management and Industrial Services Ltd. 	<ul style="list-style-type: none"> ▪ Shared services provision, administration of trust funds for health purposes & provision of private health services at Wairau Hospital ▪ MIS Ltd previously provided consultant services to other DHBs. 	
Keith Rusholme	<ul style="list-style-type: none"> ▪ Wife provides first aid training and complimentary help services. 		<ul style="list-style-type: none"> ▪ Provision of services to DHB staff or contracted providers. 	<ul style="list-style-type: none"> ▪ Sister works for IDSS.
Mike Cummins	Nil			
Peter Burton	Nil	<ul style="list-style-type: none"> ▪ NMDHB Representative on Tasman Council's Regional Land Transport Committee. 		
Robyn Henderson	Nil			

Name	Existing – Health	Existing – Other	Interest Relates To	Possible Future Conflicts
Sharon Kletchko	<ul style="list-style-type: none"> ▪ Member Exceptional Circumstances Panel – PHARMAC ▪ Treasurer, International Society for Health Care Priorities ▪ Member St John South Island Region Trust Board ▪ Member RACP NZ Policy and Advocacy Committee. ▪ South Island Representative on RACP NZ Joint Executive. ▪ Member of the Medicine’s Review Committee (Medicine’s Act) MEDSAFE ▪ Member DHBRF Governance. 	<ul style="list-style-type: none"> ▪ Deputy Chair of the New Zealand Standards Council. 		

3 MINUTES

MINUTES OF THE OPEN MEETING OF THE COMMUNITY AND PUBLIC HEALTH ADVISORY COMMITTEE (CPHAC) OF NELSON MARLBOROUGH DISTRICT HEALTH BOARD			
Date	31 August 2010	Time	12.30
Where	Support Services Room 3, Wairau Hospital, Blenheim connected by videoconference to DHB Seminar Centre, Nelson	Previous meeting date	22 June 2010
Present	Liz Richards, Judy Crowe, Judith Holmes, Jenny Black, Sonny Alesana, John Moore (Chair), Lorraine McMath, Suzanne Win		
In attendance	Jasmin Brandt (Secretary), Mike Wiles, Peter Burton, Christine Donnelley, Harold Wereta, Sharon Kletchko, John Peters, Penny Wardle		
Apologies	Nil		
Mihi/Intro	Lorraine McMath		

Item	Discussion	Action	Who/ When
Apologies	Nil received		
Registrations of Interest		Moved: Judy Crowe Seconded: Lorraine McMath THAT THE REGISTRATIONS OF INTEREST BE NOTED. AGREED	
Minutes	<p>Matters Arising</p> <p><u>Dan McGuire's enquiry regarding noise level submission to council.</u> GM P&C advised that the public health unit was following this up. Question raised whether DHB has tools to measure noise levels. LTA measures this.</p> <p><u>Terms of Reference (ToR) Te Roopu Tupu Tahi (TRTT).</u> Chair noted that he had written a letter to TRTT's facilitator after the last</p>	Moved: Judith Holmes Seconded: Judy Crowe THAT THE MINUTES OF THE MEETING ON 22 JUNE 2010 BE ADOPTED AS A TRUE AND CORRECT RECORD. AGREED	

Item	Discussion	Action	Who/ When
	<p>meeting, thanking her for the ToR, and advising that the DHB has no view on meeting frequency.</p> <p><u>Legislative change re: tar and nicotine.</u> Letter sent to Maori Affairs Select Committee by GM P&C (document tabled at this meeting). The letter proposed a reduction in the level of nicotine and other chemicals in tobacco products. The committee thanked GM P&C for sending this on their behalf.</p> <p><u>Health Promotion Plan.</u> Covered in presentation later this day.</p> <p><u>Pharmaceutical spend investigation.</u> GM P&F noted that the Acting Chief Medical Officer is in the final stages of review and will be making recommendations to SLT soon. Question raised whether the Pharmacy Advisory Group is involved? It was noted that they will be involved in commenting on recommendations at a later stage.</p>		
Correspondence	<p>Bronwyn White re: “Settling In” Chair noted that he had spoken to Bronwyn to thank her for correspondence. CE noted that this is a multi-agency effort which is to be commended. Sonny Alesana noted that Nelson takes in the most traumatised refugees in NZ. Chair suggested that ‘Settling In’ could meet with TRTT to progress matters regarding appropriate care of traumatised refugees. Meeting noted that generally speaking this matter was too operational for governance level. GM P&F noted that she will have appropriate portfolio managers check whether the DHB’s Mental Health Action Plan already has mechanisms in place.</p> <p>Cynthia McConville Judy Crowe noted that Auckland DHB had sent someone to the conference; is there likelihood of NMDHB sending someone? GM P&F noted that we have a courses and conferences policy in place</p>	GM P&C to pen a letter thanking her for excellent work and staff participation	GM P&C/ September

Item	Discussion	Action	Who/ When
	<p>for staff who wish to attend conferences and other training. CE noted that due to current financial constraints, the organisation's emphasis was on training we have contractual obligations for.</p>		
<p>Reports</p>	<p>Committee Chair The Chair spoke to his report.</p>	<p>Moved: John Moore Seconded: Judy Crowe</p> <p>THAT CPHAC RECOMMEND TO THE INCOMING BOARD THAT A JOINT DHB AND LOCAL AUTHORITY GOVERNANCE MEETING BE HOSTED AFTER THE UPCOMING LOCAL ELECTIONS. AGREED</p> <p>Moved: John Moore Seconded: Lorraine McMath THAT THE CHAIR' S REPORT BE RECEIVED. AGREED</p>	
	<p>Te Roopu Tupu Tahī Report taken as read.</p> <p>Chair noted appreciation for Merrill Brunt's efforts during her time as Consumer Advisor for the DHB's Mental Health Service. Question raised if a new consumer advisor has already been appointed following Merrill's retirement, and if so, who this is?</p>	<p>Moved: Judy Crowe Seconded: Liz Richards THAT REPORT FROM TE ROOPU TUPU TAHI BE RECEIVED. AGREED</p> <p>Chair to formally express CPHAC's thanks to Merrill Brunt, retiring consumer advisor Mental Health Service</p>	<p>Chair/ September</p>

Item	Discussion	Action	Who/ When
	<p>GM Planning and Funding Report taken as read.</p> <p>Alliance Developments GM P&F noted that the Canterbury workshop information is now online and that Jasmin will send the password to members. It was also noted that NMDHB CE had met with PHO CEOs last week and agreed on a draft charter and terms of reference which will be reviewed by clinical advisory groups and governance next.</p> <p>Financial Report Assumptions questioned on page 28. Noted that Murchison Health Service will require DHB to apply to Ministry for revenue. GM P&F positive that we will get some funding, but negotiations are yet to be had.</p> <p>Chair expressed thanks for keeping the finances as tight as they are.</p>	<p>Moved: Liz Richards Seconded: Jenny Black</p> <ul style="list-style-type: none"> ▪ THAT THE REPORT FROM THE GENERAL MANAGER PLANNING AND FUNDING BE RECEIVED. ▪ THAT THE FINANCIAL REPORT BE ADOPTED. <p>AGREED</p>	
	<p>Director of Maori Health The director spoke to his report.</p> <p>Expressions of Interest – Whanau Ora Noted that Whanau Ora EOI results should be out end of October. Ministry had thanked NMDHB for application.</p> <p>Question raised around future service delivery: if no one from this region is successful, is there a possibility that services will be delivered by providers from afar? Consequences of decisions are not known at this point in time.</p> <p>Pacific Health The Pacific Health Reference Group is working on the 2008 Health Report to the DHB on the State of Health of the Pasifika community</p>	<p>Moved: Sonny Alesana Seconded: Judith Holmes THAT THE REPORT FROM THE DIRECTOR OF MAORI HEALTH BE RECEIVED.</p> <p>AGREED</p>	

Item	Discussion	Action	Who/ When
	<p>in the Top of the South. The group will be aligning this document with the National Health strategy. There will be a stock take of the Heads of Agreement with the DHB and the Memorandum of Understanding and Alliance with Nelson Bays Primary Health and Kimi Hauora Wairau. The outcome of this stock take will be a future work plan for the Pasifika Health Reference Group.</p> <p>Sonny noted concern that there has been an under counting of the population in the top of the south, comparing census data from 2001 and 2006; further concern was noted around health population data collected by health service providers. Sonny requested data collection of Pasifika patients be addressed through this forum.</p>		
	<p>GM Primary and Community Spoke to his report.</p> <p>Golden Bay GM P&C noted favourably that St John have agreed to join the integrated project in Golden Bay.</p> <p>Nutritional and Physical Activity (NPA) NPA now funded till June 2012. Continuity will have to be revisited then. Question raised around dieticians – will they not be available at all for public consultation when NPA discontinues, seeing as they sit under NPA? Noted that this discussion needs to be held as part of Health Promotion Plan discussion. Noted that currently the roles in effect are project manager roles, not dietetic one-on-one service. CPHAC noted it was important to note this issue as needing to be addressed by future board.</p> <p><i>Penny Wardle leaves the meeting</i></p> <p>GM P&F noted that on a practical level, this matter is likely to be addressed by clinicians as part of clinical workstreams in a whole of</p>	<p>Moved: Jenny Black Seconded: Lorraine McMath THAT THE REPORT FROM THE GENERAL MANAGER PRIMARY AND COMMUNITY BE RECEIVED. AGREED</p>	

Item	Discussion	Action	Who/ When
	<p>system approach. Governance will only need to provide strategic direction; clinicians to sort out operational practicalities. This also applies to issues around bariatric surgery.</p>		
<p>Members' Issues</p>	<p>Members' Issues</p> <p>Murchison Hospital and Health Centre NMDHB CE noted that the Rutherford Initiative (RI) report had found that there was no justification for PHOs becoming responsible for services in Murchison. The CE further noted that when he had shared the findings from the RI report with the Murchison community (over 100 people present), they had indicated consent to paying for GP service as part of removal of special area status, as this would bring them on an equal footing with the rest of the district.</p> <p>Noted that the model of care chosen is very good for Murchison. It would have been difficult and impractical to separate primary care delivery from hospital care delivery, as it is closely married up, i.e. with same staff providing care in both secondary and primary care. The CE noted, however, that future PHO involvement may still be looked at in other areas of care, e.g. annual diabetes checks.</p> <p>Board Chair Suzanne Win noted that she was pleased with Murchison people having made this work for them and that she would be concerned if we created artificial barriers for ourselves – especially if the people of Murchison are happy.</p> <p>Removal of special area status: due to a number of circumstances it has taken Nelson Marlborough 17 years to move in line with rest of country, which removed special area status back in the 1980s.</p>		
<p>Presentation</p>	<p>Health Promotion Plan</p> <p>The GM Primary and Community gave this presentation.</p>		

Item	Discussion	Action	Who/ When
	<p>Importance noted in connecting planning with the South Island Health Services Planning framework. PHOs are keen to progress district wide health promotion planning.</p> <p>GM P&C elaborated on the five focus areas identified in the health promotion plan: nutrition, physical activity, tobacco, child/ youth service and alcohol. Noted that interconnectivity between those focus areas can easily be established. The GM P&C then spoke to the four supporting themes identified: public policy (e.g. HIA), health literacy, public health leadership (e.g. Talking Heads) and intersectoral. Whanau Ora, Equity and Equality as well as Analysis and Evaluation were identified as the intrinsic foundations for the planning for all the above activities.</p> <p>GM P&C noted that a business case is awaiting approval from Ministry of Health. Feedback so far has been encouraging.</p> <p>PHS Annual Plan 2010/11 has been redesigned to include the above focus areas and themes. KHW and NBPH are keen to align health promotion service delivery with the framework.</p> <p>Q&A Do we know if this will merge happily with South Island Health Service Planning (SI HSP)? GM P&C is envisaging an 18-month project, currently appointing person to run this workstream. GM P&F noted that approach of SI HSP reflects our Jumbo model and that the idea is to bring this workstream under the SI HSP umbrella in a one-system approach.</p> <p>It was noted that public health services have been funded by MoH while all others have been funded through DHB. This has made it difficult to find a system that provides the best of both worlds. Chair noted that CPHAC has a huge interest in these developments, and</p>		

Item	Discussion	Action	Who/ When
	<p>that involvement in the early levels of development are much appreciated.</p> <p>Liz Richards questioned why we need to spend a lot of time and effort on a local workstream to change something the DHB does not have any control over? Why spend money on planning when this could go into front line delivery? Should we not go with SI HSP seeing as the planning level is above the DHB?</p> <p>Chair noted that initially we had a much more integrated service at the DHB.</p>		
	<p>The meeting went into closed section at 2.00pm</p>	<p>Moved: Liz Richards Seconded: Judy Crowe</p> <p>THAT THE COMMITTEE RESOLVE ITSELF INTO A COMMITTEE OF THE WHOLE AND THAT IN THE TERMS OF THE NZ PUBLIC HEALTH AND DISABILITY ACT 2000, THE PUBLIC BE EXCLUDED WHILE THE FOLLOWING ITEMS ARE CONSIDERED:</p> <ul style="list-style-type: none"> ▪ Minutes of a meeting of committee members held on 17 February 2009 (Clause 34 (a) Fourth Schedule NZ Public Health and Disability Act 2000) ▪ South Island Health 	

Item	Discussion	Action	Who/ When
		<p>Services Planning – To protect information that is subject to negotiation (Clauses 34 (a) and (b) Fourth Schedule NZ Public Health and Disability Act 2000)</p> <ul style="list-style-type: none"> ▪ Statement of Services Performance – To protect information that is subject to audit and negotiation (Clauses 34 (a) and (b) Fourth Schedule NZ Public Health and Disability Act 2000) ▪ Business Case: After Hours – To protect information that is subject to negotiation (Clauses 34 (a) and (b) Fourth Schedule NZ Public Health and Disability Act 2000). <p>AGREED</p>	

RECOMMENDATION

THAT THE MINUTES OF THE MEETING HELD ON 31 AUGUST 2010 BE ADOPTED AS A TRUE AND CORRECT RECORD OF THE MEETING.

Matters Arising

- **“Settling In” project** – refer to correspondence for outgoing letter from GM Primary and Community
- **Consumer Advisor for the DHB’s Mental Health Service** – refer to correspondence for letter sent to retired consumer advisor Merrill Brunt. The position is currently being advertised to find a new advisor.

4 CORRESPONDENCE

Outgoing

Date	Sender	Recipient	Regarding
6/9/10	GM Primary & Community	Bronwyn White	Response to letter received
28/9/10	Chair	Merril Brunt	Letter of appreciation for services as Consumer Advisor for the DHB's Mental Health Service

Refer to appendix A for detail

5 MONITORING REPORTS

5.1 CHAIR'S REPORT

The triennial elections for seven places on the new DHB Board are over and we now look forward to hearing who the four ministerial appointments will be. Congratulations to the three current CPHAC members who successfully stood for re-election.

We should also acknowledge the retirement of Suzanne Win, the present Board Chair. We thank her for her time as Chair and appreciate the efforts she has made to be present at, and contribute to, our meetings. We wish you well, Suzanne.

Liz Richards also deserves special mention as a retiring nine year major presence on CPHAC. Thank you, Liz, for all you have done for the community as a member. Again, we wish you well. I have great confidence that you make your presence apparent in other roles!

Judith Holmes and Lorraine McMath have both made an impact for their communities and deserve our grateful thanks. We hope perhaps they retain enough energy to put their names forward again!

At the Board meeting of 28th September the proposal for the construction of an After Hours Primary Care Facility was approved subject to the Minister's approval. If approved, this should enhance local services and strengthen the relationship between primary and secondary services.

We look forward to hearing more about recent progress with the Golden Bay Integrated Care Facility.

John Moore.

RECOMMENDATION

THAT THE CHAIR'S REPORT BE RECEIVED.

5.2 REPORT FROM TE ROOPU TUPU TAHI

We have two meetings to report on for this month's agenda. Te Roopu Tupu Tahī met on **31 August** in Blenheim and these were some of the items covered at the meeting:

Kimi Hauora Wairau Marlborough PHO – Christine Smith, the CEO of Kimi Hauora Wairau, came to the meeting to explain the role of the PHO in Marlborough and the services it provides to the community. One issue discussed was the difficulty in recruiting general practitioners to the district and how a range of incentives were being explored.

Alison Graham, the Primary Mental Health Co-ordinator, spoke about the success of two programmes aimed at reducing anxiety, where results to date have indicated that the aim is being achieved. She is also launching a programme in conjunction with the Marlborough District Council libraries, where self-help books for people with mild-to-moderate mental illness are available in the libraries. These are specially tagged with a SMART logo sticker, and a catalogue of Smart Books has been produced in a special brochure which will be circulated to GPs throughout the district.

Series of articles on Mental Illness in the Nelson Mail and Marlborough Express – Members of CPHAC will no doubt have seen the five articles that appeared in the local papers in August on aspects of mental illness and some of the NGOs who provide mental health services. We were impressed that this series was initiated by the Nelson Mail reporter Naomi Arnold who conducted the research for the articles. NGO members reported positive feedback from both service users and staff on the subject matter and approach taken.

Mental Health Awareness Week – NGO members spoke about their preparations for Mental Health Awareness Week which was held 4 – 10 October. This year's theme was "Flourishing for everyBODY – feel good and function well" (more about this below). NGO members expressed disappointment that the funding for health promoters who have responsibility for mental health has been reduced so much that there are now very limited resources to assist with organising events for Mental Health Awareness Week and other such activities that promote mental wellbeing in the community.

PRIMHD – In February I reported on the difficulties some of the NGOs were experiencing in implementing the PRIMHD system of information reporting. NGOs are still experiencing difficulties and are finding the whole business very time consuming and expensive. They say there are too many reporting lines and duplication of data entry for information which goes directly to the Ministry and that which goes to PRIMHD. Some reporting requirements are so complicated that they have to use a paper-based system to ensure that staff provide the right information to the manager so that he or she can complete the PRIMHD reports. The NGOs are very unhappy about the requirements and expense placed on them especially at a time when they are expected to economise on staff hours. Lorraine Eade said that

their experience was replicated throughout the South Island and that feedback had been passed on to the Ministry. However, she said that the Ministry is continuing to require NGOs to report quarterly until PRIMHD is fully implemented.

Website Information – The Group spent some time towards the end of the meeting having a look at websites that provide information on mental illness and self-help tools for mental wellbeing. Some useful sites are:

www.depression.org.nz

www.thelowdown.co.nz

www.alac.org.nz

www.nmdhb.govt.nz/mentalhealthplanning

www.beyondblue.org.au

www.moodgym.anu.edu.au

www.moodjuice.scot.nhs.uk

www.carers.net.nz

www.marlboroughpho.org.nz/programmes

www.skylight.org.nz

On **12 October** Te Roopu Tupu Tahi met in Nelson, and these are some of the items on the agenda:

Proposal for Changes to the Psychogeriatric Service – Rosey Wilson, Robyn Byers, Mark Garisch and Jane Large attended the meeting to provide information about the proposed changes to the Psychogeriatric Service. Members of CPHAC will no doubt be familiar with the details of this proposal (or see: <http://www.nmdhb.govt.nz/Consultations.aspx>). Rosey explained the background to these proposed changes and the involvement of the Rutherford Initiative in developing the ideas. She stressed that the emphasis is on providing a service which embodies Best Practice and meets the needs of the older population. NGO members were encouraged to take part in the consultation process and to assist with the dissemination of the information about this service throughout the community.

NMDHB new Management Structure – Congratulations were given to Robyn Byers on her appointment to the position of Service Director of the Mental Health Service Directorate. Robyn spoke briefly about her new role and the other members of the Directorate team.

Mental Health and Alcohol and Drug Sector Performance Monitoring and Improvement Report 2009/10 – Lorraine Eade advised the group that this report has recently been published and that Nelson Marlborough has been placed in the top 3 or 4 of all the DHBs in the country for most of the key performance measures reported on. This is a testimony to the DHB's leadership in mental health and the staff who work in the service. A summary of the report is being provided by Lorraine to CPHAC and HAC.

Mental Health Awareness Week – There was a great range of activities organised by NGOs during this week. They included a laughter workshop, a community walk, newspaper articles, open days, launching of Smart Books (mentioned above), radio interviews, and premiere of the film "Insatiable Moon". A luncheon for the Business

Forum on Mental Health at Trailways Hotel was held with invited guests Denise L'Estrange-Corbet, co-owner of World fashion label, and Andrew Bridge, manager of Workstar who both spoke about mental illness in the workplace. This event was organised by Health Action Trust and Like Minds Like Mine and was deemed to be very successful by those who attended. A report of the lunch was featured on Radio New Zealand National Check Point programme.

Motueka Mental Health Network – This group met in September and has completed the revision of its Terms of Reference. Work on getting a community notice board outside Community House, which gives information on mental health services in the town, is almost complete and it is hoped to have the board erected by the end of November. The Health Promoters Sue Bateup and Hilary Genet are working on a programme to provide support to seasonal workers and other visitors to the community who might experience mental ill-health and not know where to turn for help.

Key Performance Indicator Framework for Mental Health – Lorraine Eade gave a presentation on this project. It is funded by the Ministry of Health to enable services to learn about practices that lead to improved outcomes for service users. It has a quality improvement focus and has been designed as a generic framework for use across the sector with benchmarking on 13 Key Performance Indicators against which individual DHBs can compare their performance. Its aim is to learn about practices that lead to quality improvements and to promote them. It combines clinical, management and NGO participation, with data sharing and a view towards publication. The NGO participating in our district is Te Whare Mahana in Golden Bay.

As this meeting will be the last with the current CPHAC membership, we would like to thank you for your interest in Te Roopu Tupu Tahī and the issues that we cover in our meetings. We hope that these reports give you a better understanding of mental health services in the district.

Carol Gowan
Facilitator
Te Roopu Tupu Tahī

RECOMMENDATION

THAT THE REPORT FROM TE ROOPU TUPU TAHI BE RECEIVED.

5.3 REPORT FROM GM PLANNING AND FUNDING

Mental Health and Addictions

Request for Proposal Selection Panel recommendations for Blenheim Day Activity Services have been accepted for implementation by Planning and Funding. A meeting has been organised with Richmond New Zealand for 15 October to discuss the transition process. Nelson Day Activity recommendations are pending.

Child and Youth

Contract negotiations with Maternity Services Limited for continuation of the services in Motueka were completed prior to expiry on 19 September. Agreement was reached and the contract documentation is in process. The Rutherford Initiative is currently reviewing maternity and related services.

Accountability

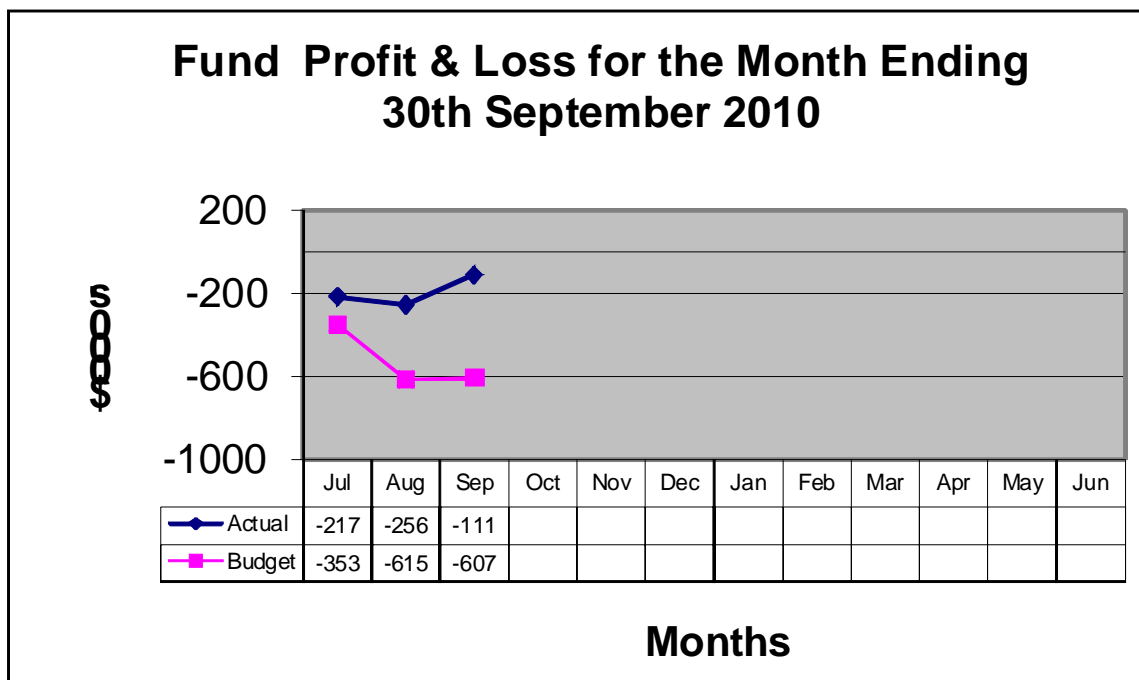
The reporting to the Ministry of Health for Quarter Four 2009/10 was completed on time and a high level of achievement was recorded against NMDHB performance measures.

Operating Result NMDHB Fund Division

Statement of Financial Performance for the Month 30 September 2010

\$000	September 2010			Prior Year YTD Act	Year to Date			Full Year			
	Budget	Actual	Variance		Budget	Actual	Variance	DAP	Forecast	Variance	
Revenue											
PBF Vote Health-Mental Health Ringfence	2,978	2,978	(0)	8,891	8,933	8,933	(0)	35,733	35,733	0	
PBF Vote Health-Other	24,704	24,704	(0)	71,978	74,112	74,112	(0)	296,447	296,447	0	
PBF Adjustments	0	80	80	(181)	0	212	212	1	0	792	792
MOH - Funding Subcontracts	1,568	1,529	(39)	2,914	3,778	3,814	36	15,112	16,177	1,065	
IDFs - Mental Health Services	66	56	(10)	195	197	167	(29)	2	786	721	(66)
IDFs - All Other (excl. Mental Health)	526	576	51	1,496	1,577	1,729	152	3	6,306	6,885	578
Total Revenue	29,840	29,922	82	85,293	88,596	88,967	370		354,384	356,754	2,369
Expenses											
Personal & Public Health Expenditure	21,679	21,731	(52)	61,517	64,596	64,678	(82)		258,559	260,262	(1,702)
Mental Health Expenditure	3,043	3,028	15	9,191	9,130	9,091	39		36,520	36,496	23
HOP Expenditure	4,483	4,431	52	12,884	13,600	13,519	81		54,567	54,706	(139)
Hauora Maori Expenditure	228	210	18	651	683	665	18		2,732	2,732	(0)
Governance & Admin Expenses	458	458	(0)	1,415	1,375	1,375	(0)		5,501	5,501	0
Total Expenditure	29,891	29,859	33	85,658	89,384	89,327	56		357,879	359,697	(1,818)
Net Surplus/(Loss) Mental Health	(0)	5	5	(105)	(0)	10	10		(0)	(43)	(42)
Net Surplus/(Loss) Other (Excl. Mental)	(51)	58	109	(259)	(787)	(370)	417		(3,494)	(2,901)	593
Net Surplus/(Loss) All Services before	(51)	64	115	(365)	(788)	(361)	427		(3,494)	(2,943)	551
Interest Received	59	81	22	214	180	249	69	4	715	868	153
Total Fund Net Surplus/(Loss)	8	145	137	(151)	(607)	(111)	496		(2,779)	(2,075)	704

The Fund has a YTD deficit of \$111K against a budget deficit of \$607K at the end of September 2010. This is an overall positive variance of \$496K.



Revenue:

The total Fund revenue (excluding interest received) is above budget by \$370K at the end of September. The main variances are:

- PBF adjustments - \$198K net funding for Herceptin costs and 14K additional funding for Child, Youth and Family Services
- IDF Revenue Mental Health – unfavourable variance of 29K for Community Forensic Mental Health Services. There have been ongoing discussions in the last few months around how funding of this service is to flow through to DHBs. At the beginning of October the MoH has finally decided to roll the funding for this service into PBFF. Each DHB will receive a share of the additional national funding based on their PBFF share.
- IDF revenue (excluding Mental Health) – favourable variance of \$152K is the estimated inflow revenue relating to the PBF adjustment for Herceptin costs from 1st July. This will be offset by increased expenditure.

4 Interest Received

Favourable variance of \$69K. Total cash is close to DAP assumptions but deposits made early in the month that mature before the end of the month have generated significant interest. These deposits are not quantified in the DAP model

Expenditure:

Overall Provider payments are \$56K under budget.

Provider Payments

\$'000	September 2010			Prior Year YTD Act	Year to Date			Full Year		
	Budget	Actual	Variance		Budget	Actual	Variance	DAP	Forecast	Variance
Personal & Public Health										
Child and Youth	130	130	(0)	371	391	391	(0)	1,564	1,564	(0)
Laboratory	450	460	(9)	1,315	1,351	1,361	(10)	5,406	5,398	8
Maternity and Neonatal	869	853	16	2,619	2,608	2,572	36	10,433	10,420	14
Sexual Health	62	61	0	184	185	184	1	742	738	4
Dental	631	679	(48)	1,658	1,938	1,986	(47)	7,953	7,955	(2)
Pharmaceuticals	2,925	2,994	(69)	7,697	8,562	8,637	(75)	33,560	33,560	(0)
Pharmaceutical Cancer Treatment	152	154	(1)	451	457	456	1	1,830	2,118	(289)
PHO and GP Services	2,041	1,922	118	5,731	6,105	5,922	183	24,295	24,748	(453)
Rural Bonus	371	353	18	1,082	1,112	1,099	13	4,450	4,513	(63)
Immunisation	30	38	(8)	40	82	128	(46)	819	875	(56)
Radiology	196	196	0	676	588	588	0	2,352	2,352	0
Palliative Care	321	329	(9)	1,017	962	959	4	3,850	3,850	(0)
Other Community Based Services	630	606	24	2,029	1,890	1,817	72	7,558	7,545	13
Chronic Disease Management	99	99	(0)	311	296	296	(0)	1,185	1,185	(0)
Medical/Surgical	8,464	8,463	1	24,476	25,392	25,387	4	101,568	101,568	(0)
Emergency Services	686	686	0	1,946	2,057	2,057	0	8,226	8,226	0
Miscellaneous Services	143	140	3	580	428	423	5	1,711	1,712	(1)
Price Adjusters	163	167	(4)	155	239	251	(12)	1,258	1,305	(47)
Patient Travel & Accommodation	387	408	(21)	1,100	1,161	1,173	(12)	4,643	4,643	0
Nutrition and Physical activity	153	153	(0)	513	458	458	(0)	1,833	1,833	(0)
Tobacco Control	29	24	5	91	88	73	14	351	303	47
HPV Programme	46	42	3	148	137	132	5	548	548	(0)
Vision hearing Screening	9	9	0	66	28	28	0	113	113	0
Inter District Flows-Personal	2,693	2,766	(73)	7,260	8,078	8,297	(219)	32,311	33,189	(878)
Total Personal & Public Health Expenditure	21,679	21,731	(52)	61,517	64,596	64,678	(82)	258,559	260,262	(1,702)
Maori Health										
Whanau Ora	133	115	17	391	398	380	17	1,590	1,590	(0)
Workforce and Service development	95	94	1	260	285	284	1	1,142	1,142	(0)
Total Maori Health Expenditure	228	210	18	651	683	665	18	2,732	2,732	(0)
Mental Health										
Acute Mental Conditions	448	448	0	1,333	1,344	1,344	0	5,375	5,375	0
Sub-Acute & Long Term Mental Conditions	159	159	0	474	476	476	0	1,906	1,906	0
Respite	82	82	0	276	247	246	1	986	984	2
Alcohol & Drug	320	313	7	980	959	945	14	3,835	3,853	(18)
Child & Youth Mental Services	371	362	9	1,113	1,113	1,113	0	4,451	4,451	0
Forensic Services	33	33	0	78	98	98	0	393	393	0
Kaupapa Maori Services	35	35	(0)	103	104	104	(0)	414	414	(0)
Mental Health Team Services	813	819	(6)	2,406	2,439	2,458	(19)	9,755	9,832	(77)
Prison/Court Liaison	11	11	0	34	34	34	0	138	138	0
Mental Health Workforce Development	3	4	(1)	17	10	12	(3)	38	49	(11)
Day Activity & Rehab Services	102	102	0	325	305	305	0	1,221	1,221	0
Consumer and Carer/Family Support	47	47	0	145	142	142	0	568	568	0
Community Home Based Support	37	40	(3)	108	111	94	18	446	428	18
Community Residential Beds & Services	352	346	6	1,102	1,057	1,038	19	4,227	4,151	77
Mental Health – Other	13	12	1	23	38	36	2	151	151	0
Inter District Flows-Mental	218	215	3	675	653	645	8	2,612	2,580	32
Total Mental Health Expenditure	3,043	3,028	15	9,191	9,130	9,091	39	36,520	36,496	23
DHB Governance & Administration	458	458		1,415	1,375	1,375		5,501	5,501	0

Provider payment variances from budget >\$30K are as follows:

Personal Health

Total payments for Personal and Public Health services are \$82K above budget.

Favourable

- 5 Payments for PHO and GP services are \$183K favourable to budget. Payments for PHO Performance Management programmes have not yet been made. This under spend is offset by revenue below budget. Invoices are not raised until expenditure has occurred.

Unfavourable

- 6 Immunisation (\$46K). This is a demand driven service. Expenditure on vaccinations has been higher than expected in the months July to September, related to the Ministry of Health widening access to free influenza (including HIN1) vaccinations.
- 7 Inter District Flows (\$219K) is the estimated outflow expenditure relating to the PBF adjustment for Herceptin costs from 1 July IDFs (this is balanced by additional revenue).

M ori Health

Maori Health services are tracking close to budget.

Mental Health

Total payments for Mental Health services are \$39K favourable to budget. This is due to minor variances across all Mental Health service lines. (Some payments for Home Based Residential Support were withheld for non-delivery of service).

IDF wash up for 2009/10

Information from MoH indicates that the actual net IDF wash up for 2009/10, payable to other DHBs, will be \$226K less than estimated for the June 2010 financial statements. (Outflows are \$270K favourable, Inflows are \$44K unfavourable). This payment is due to be paid in October and was not accounted for in the September financial statements.

Governance and Administration expenditure is tracking to budget

Year-end Forecast

At this stage, the Fund is forecast to end the year with a favourable variance (\$704K) to budget.

The following assumptions have been made

- Interest received will continue to show a favourable variance for the remainder of the year
- Net effect of increased expenditure on Herceptin – drug cost (\$289K) and net IDF flow (\$224K) is \$288K less than the PBF share of Herceptin funding (\$801K) for 2010/11

- Community Pharmaceutical expenditure will continue to track to budget for the remaining nine months.
- Expenditure on MoH funded PHO programmes will be \$370K higher than budget. This is offset by increased revenue.
- Growth in PHO enrolled population will be higher than budget resulting in \$83K overspend on PHO capitation expenditure by the end of the year.
- Net effect of all IDF wash-ups occurring in the 2010/11 year will be zero
- We have not as yet factored in changes to Murchison Health Services related to not as yet realised Ministry of Health revenue (Care Plus, SIA, HP, under sixes free access) and expected costs.

RECOMMENDATION

THAT THE REPORT FROM THE GENERAL MANAGER PLANNING AND FUNDING BE RECEIVED.

5.4 REPORT FROM DIRECTOR OF MAORI HEALTH

DHB Whanau Ora Programme

For the past three years, the DHB has been developing its Whanau Ora implementation programme. The key focus of this activity has been towards four core projects, which are Whanau Ora modelling; Whanau Ora services development; Maori health provider coalition; and measurement/ performance review.

Whanau Ora Modelling

Following on the heel of the Whanau Ora National Taskforce Report, the DHB completed a stock-take on its own Whanau Ora programme to ensure there is alignment to the national requirements. We have found there to be

- good alignment to the National principles promoted and the work programme started by the DHB in 2008.
- alignment to the Whanau Ora programme designed by this DHB to the expectations set out nationally.
- more work required to ensure that the DHB focus is more about Whanau Centred Services. Presently, the DHB programme is more geared towards service management and reconfiguration.

The review was completed internally and the results give a good indication that the DHB work programme is in line with Government policy on Whanau Ora.

Whanau Ora Service Development

The DHB established four new services in 2009: Tane Ora, Kaumatua Ora, Palliative Care and Pathfinder (Cancer). The services emerged out of a desire by Maori health providers to develop models and processes that work to the best advantage of whanau.

All the services have been reviewed. The Palliative Care service report is completed and has been sent out to the sector for final feedback. A meeting with Te Hauora O Ngati Rarua, Te Amo Health and Whakatu Marae Health and Social Services has taken place. A set of actions have been agreed to. They include strengthening of the leadership models in the collaboration; improving the way contracting is done between the collaboration partners and aligning reporting functions.

The reports for Tane Hauora and Kaumatua Services and have been delayed due to the departure of the Portfolio Manager Maori Health in August 2010 but are near completion.

Maori Health Provider Coalition Update

Progress continues to build towards the Maori Health Provider Coalition. The planned workshop set for 4 October 2010 has been rescheduled to 21 October 2010. However, on 4 October the Maori Health Provider Business Managers Forum met. There was a lengthy discussion on the 'Coalition'. What they agreed to was the following:

- The Pathfinder Service that Te Amo Health was going to lead will be placed into the 'Coalition' until a decision is made by the collective on who the lead provider will be.
- Te Rapuora will contract manage, on behalf of the collective, the Whanau Ora Heads of Agreement funding. The contract will specifically identify funding levels for each provider and accessibility to the funds.
- There was consensus to a work programme which is summarised in the table below.

Service Development	Infrastructure
• Whanau Ora Model of Care	• Shared services – IT, HR, Mgmt support & governance
• Hubs modelling	• Financial modelling
• Business support model	• Risk management modelling
• Outcomes modelling	• Strategic/ business planning modelling
• Identification on what services will be managed through the 'Coalition'	• Contract management performance

- There was agreement that workstreams will be led/ managed by 'Coalition' member providers who will be accountable for milestone achievements.
- One last point, the Maori health provider managers agreed that the MOU will become an agreement document that binds parties to the relationship. They viewed this as being important so that ownership to the 'Coalition' is shared.

The meeting highlights a growing desire and maturity to work toward managing the difficult and complex decisions they will need to make under the 'Coalition' work programme.

RECOMMENDATION

THAT THE REPORT FROM THE DIRECTOR OF MAORI HEALTH BE RECEIVED.

5.5 REPORT FROM GM PRIMARY AND COMMUNITY

September 2010

Health Protection and Health Promotion

- Conducted two **Controlled Purchase Operations** (CPOs) to assess compliance with the Smoke Free Environments Act CPO operations (59 premises) with the excellent outcome of 'no sales' to our underage volunteers. Health Promotion did the pre-CPO education/premise audit, followed up by the CPO exercise with Health Protection. When a retailer refuses to sell, the retailer not only complies with their legal obligations under the Smokefree Environments Act, but also contributes to a reduction in youth smoking rates and importantly contributes to preventing the youth starting to smoke.
- Drinking Water Assessors and Medical Officer of Health were sent to assist with duties following the **Canterbury earthquake**: in the Emergency Operations Centre; and, with council inspections teams, looking at food premises to ensure that hygiene and sanitation were able to be maintained, and doing housing sanitation inspections. A presentation is being prepared for DHB staff.
- Nelson Bays Primary Health and **Early Child Health Oral Health** are mapping oral health services in the Nelson Tasman region. General Practices are being informed in writing of enrolment processes for the School Dental Service and adolescent services, and services available for low income adults.
- Recent **Smokefree Hospital** meetings with both PHOs have been productive and a number of joint initiatives will evolve in the next two months.

Nutrition and Physical Activity Programme

- **Quality Improvement Programme Planning System** (QIPPS) is being trialled with the planning of several projects using this online tool, and is being used to develop a joint project with one of the Councils.
- There were 5,300 attendances at the Nelson and Tasman **Way2Go** Hubs community programmes.

5.5.1 Primary Health Care

- The **Golden Bay** Interim Management Group is applying for resource consent to extend the Community Hospital for primary care and rest home facilities that will form the Integrated Family Health Centre. The application should be filed by the end of November. The IMG is developing a project plan to map out the steps required to build the Centre within 18 months. The group's focus over recent months has been gaining various legal approvals and agreements and identifying

finance and funding sources. The Government's agreement to provide funding to keep Joan Whiting Rest Home open was based on the commitment to develop the new facility by March 2012.

- NMDHB Board has approved in principal the Business Case to develop a new **Nelson Region After Hours Service** facility which will replace 96 Waimea Road. Work will now proceed to bring the business case to life.

5.5.2 Financial, Primary and Community Division

Totals ,000	YTD Budget	YTD Actual	YTD Variance	Annual Budget	Annual Forecast	Variance
Revenue						
PHS	1,426	1,422	(4)	5,703	5,675	(28)
NPA	458	522	64	1,833	1,945	112
Development	294	296	2	1,177	1,180	3
Total Revenue	2,178	2,240	62	8,713	8,800	87
Costs						
PHS	1,177	1,027	150	4,683	4,228	455
NPA	435	414	21	1,741	1,737	4
Development	284	262	22	1,132	1,071	61
Total costs	1,896	1,703	193	7,556	7,036	520
Surplus (Deficit)						
PHS	249	395	146	1,020	1,447	427
NPA	23	108	85	92	208	116
Development	10	34	24	45	109	64
Total Surplus	282	537	255	1,157	1,764	607

RECOMMENDATION

THAT THE REPORT FROM THE GENERAL MANAGER PRIMARY AND COMMUNITY BE RECEIVED.

5.6 MEMBERS' REPORTS

Nil received

5.7 MEMBERS' ISSUES

Nil received

6 GOVERNMENT PRIORITIES

Nil to report.

7 FOR DISCUSSION

Time	Topic	
1:30 – 1:45	Meeting frequencies 2011	Refer appendix B for discussion document

8 PRESENTATION & DISCUSSION

Time	Topic	
1:45 – 2:45	Health Needs Assessment Update 2010	Presentation by Sarah Simmonds, NMDHB; refer appendix C for actual document
2:45 – 3:00	Committee roles and reporting relationships with the new directorates	John Peters

APPENDIX A: CORRESPONDENCE



Nelson Marlborough
District Health Board

Primary & Community Division

Fax: 03 546 1747
Phone: 03 546 1397
Cellphone 027 414.1575

Private Bag 18
Nelson, New Zealand

6 September 2010

Settling In – Health Sector Group
C/- Bronwyn White
Public Health Service
PO Box 647
NELSON

Dear Bronwyn

Re: Settling In – Health Sector Group and Refugee mental health needs

CPHAC considered your letter of 26 May 2010 at its meeting on 31st August 2010. They were pleased to receive this information and have asked me to reply on their behalf.

CPHAC is supportive of the work of the Health Sector Group. They noted that migrants' experience post migration as the key in determining whether a person successfully resettles or not and the mental health issues to do with the most traumatised of refugees. They have referred your letter to Te Roopua Tupu Tahi and have also asked the Mental Health Portfolio Manager for Planning & Funding as to whether any further follow-up is required on the mental health issue.

They also noted that this group is predominantly Nelson focused and were keen to know of what cover there is in Marlborough for similar issues. They also noted the relatively low representation of Ministry of Social Development on your group and suggested that greater participation by MSD might be of value.

Thank you for keeping CPHAC informed of this work.

Yours sincerely

Peter Burton
General Manager
Peter.Burton@nmdhb.govt.nz



Nelson Marlborough
District Health Board

Fax: (03) 5461747
Phone: (03) 5461235

*Community and
Public Health
Advisory Committee
DHB Office*
Private Bag 18
Nelson 7042, New Zealand

28 September 2010

Merril Brunt
4 Ashbury Street
Stoke 7011

Dear Merrill

At the meeting of the Community and Public Health Advisory Committee of the DHB, held on 31 August, we were advised that you retired from your position as Consumer Advisor for the DHB's Mental Health Service, which you held for some time.

We resolved that I as Chair should write and thank you for your service to our community. I can well imagine how seriously you took your role. You need to know how much it has been recognised and appreciated.

Many thanks from us all, Merrill, and best wishes for your future.

Kind regards

A handwritten signature in black ink, appearing to read 'John Moore', with a large, sweeping initial 'J'.

John Moore
Chairperson

APPENDIX B: MEETING FREQUENCIES 2011

Introduction

The frequency of advisory committee meetings has been raised following the move to two-monthly meetings for 2010.

The Ministerial Review Group in its report 2009 commented about the number of Board and Committees, this together with the fiscal constraint led to the move from six weekly meetings. The Board noted the following impacts from the move to two-monthly meetings were expected:

- The number of meetings would be reduced to five excluding workshops. It was assumed each committee would have one workshop making the total number of meetings six, four fewer than previously.
- The financial impact, based on seven members for each Committee, was a saving of \$1,812.50 per meeting or \$21,750 if all committees only met six times per year.

A number of indirect savings in staff time were identified as arising from the reduced number of agendas and meetings.

- Agenda preparation:
 - meeting with committee chairs to develop the topics (1 – 2 hours)
 - development of the working papers (can involve range of staff – say 20 hours)
 - review by the management teams of the working papers (2 – 4 hours)
 - formatting (4 hours)
 - printing and binding (4 hours)
- Actual Meeting:
 - Staff attendance (up to 4 hours for 1 – 4 people)
 - Minute taking and preparation (4 – 6 hours)

It was estimated that savings of 50 hours per meeting were possible.

Meetings in 2010

During 2010 the committees met as follows:

DiSAC regular meeting	CPHAC regular meeting	HAC regular meeting
21 September	31 August	24 August
20 July	22 June	22 June
18 May	27 April	20 April
16 March	23 February	16 February

None of the committees held a workshop on a separate day. Each committee will be meeting one more time during 2010. The first meeting of the committees in 2011 will be in March to enable the appointment of community representatives to be completed.

The key issue that arose during the year was the fit to the financial reporting cycle and ensuring that committee reports to the Board reflected the most up to date information. This resulted in the HAC moving to the second month in the cycle.

With committees meeting two-monthly and the Board six-weekly, several committee meetings were rescheduled. The reports presented to the Board were (the months indicate the YTD financial results considered at the committee meeting):

Date	CPHAC	DiSAC	HAC	IHB
26-Jan	No meeting	No meeting	No meeting	No meeting
2-Mar	Written- Jan 10	No meeting	Verbal – Dec 09	verbal
13-Apr	No meeting	Written - Jan 10	No meeting	Tabled
25-May	Written	Verbal	Written – Mar 10	Written
6-Jul	Written - May 10	Written – Apr 10	Written – May 10	Tabled
17-Aug	No meeting	Written – Jun 10	No meeting	Written
28-Sep	Written – Jul 10	Tabled – Aug 10	Written – Jul 10	No report

Decision Making

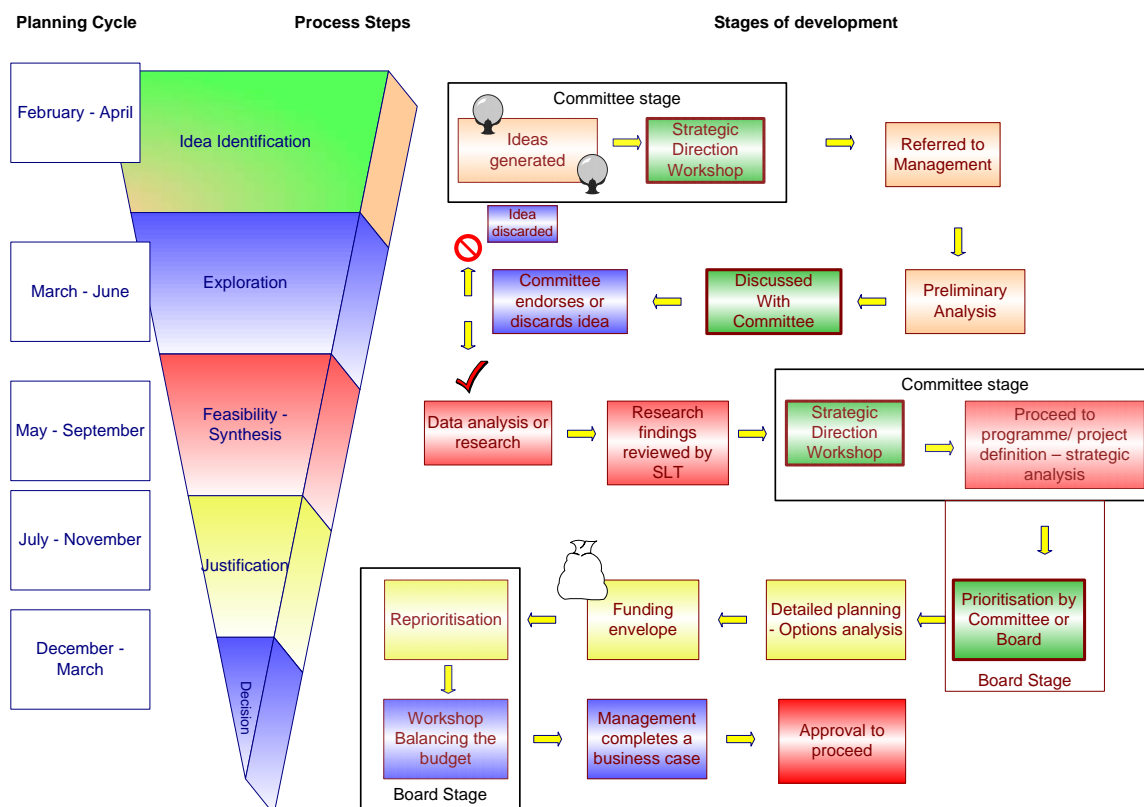
For 2011 to fit with the planning cycle for the District Annual Plan (DAP) and the appointment of community representatives, the Board is meeting on 1 February and again 8 March to review the analysis of the DAP projects and strategies. Both of the meetings will be in the form of a workshop with key stakeholders, e.g. IHB, PHOs, senior staff etc.

The change to two-monthly meetings has resulted in a small number of reports being presented either verbally or tabled as shown above. If such a report contains a recommendation by the committee there is limited opportunity for members to research the issue before being asked to make a decision.

Planning Cycle

The current planning cycle has each of the committees feeding into the ideas, projects, programmes or initiatives that should be part of the overall DAP through workshops midyear. The Board as a whole then considers all of the ideas etc from the committees about September for a decision on those which management are to complete their analysis. For 2010/11 the cycle was varied due to the pending legislative changes and the focus on achieving a break even position by 2011/12.

The various stages of the planning cycle are:



This planning process is likely to change as the move towards regional planning is integrated into the overall cycle.

Financial Impact

Under the current payment arrangements for advisory committees, members are entitled to payments of \$250 for each meeting attended with a maximum of 10. The Chair of the Committee is entitled to a higher fee. As noted in 2010, the cost of each meeting (assuming 7 members) is \$1,812.50 excluding any travel costs.

Options

The options for committee meetings in 2011 are:

- Remain with a two-monthly cycle
- Return to a six-weekly cycle.

The strengths and weakness of each option are:

Option	Strengths	Weaknesses
Two-monthly	<ul style="list-style-type: none"> ➤ Reduced staff time in servicing the meeting ➤ Lower total meeting fees. 	<ul style="list-style-type: none"> ➤ Gaps to reporting to the Board, the time between reports can be up to three months. This can be partially addressed with interim offline reporting. ➤ Information to the committee is not timely especially if it meets before the 20th.
Six-weekly	<ul style="list-style-type: none"> ➤ Fits with the Board reporting cycle ➤ Number of meetings (8) enables the committee to still have two workshops. ➤ Enables maintaining Tuesdays as DHB meeting day. 	<ul style="list-style-type: none"> ➤ Increase in staff time to service the meeting. ➤ Higher meeting costs. ➤ Information to the committee is not timely especially if it meets before the 20th.

Legislative Changes

With national and regional plans being central to delivery of health and disability services and the basis for collaboration, the focus of the committees will be on the annual plan. There will be no strategic plan.

The annual plan will set out the operational focus for the coming financial year and describes how the DHB will be held accountable for the delivery of explicit actions (national, regional and local).

A new requirement will be for DHBs to consult where the Minister of Health considers the DHB is making changes to service eligibility, access or the way services are provided that will have a significant impact on recipients of services, their caregivers or providers. The impact of these changes on the role of the committees is still to be determined.

Conclusions

With the changes in the Board membership there is a need to ensure the new members are fully briefed on health issues in Nelson Marlborough. This change in experience may also be replicated in the advisory committees.

Therefore to enable members to seek information orientation workshops will be scheduled for both board and committee members.

RECOMMENDATIONS

- That the new Board considers this paper at its first meeting and makes the decision about meeting frequency.
- That in the meantime advisory committees continue meeting two-monthly until April 2011.

APPENDIX C: HEALTH NEEDS ASSESSMENT



Nelson Marlborough
District Health Board

*Planning and Funding
DHB Office, Braemar
Campus*

MEMO

To: CPHAC

From: Sarah Simmonds, Public Health Analyst
Ext. email: sarah.simmonds@nmhs.govt.nz

Date: 18 October 2010

Subject: Health Needs Assessment

The document currently on the NMDHB website, written by Stephen Twitchin and completed in September 2008, was used as a base to create the enclosed updated Health Needs Assessment 2010. The chapters have been addressed as shown in Table 1.

Table 1 Changes to the Health Needs Assessment document

New sections	Updated Sections
Amenable Mortality	Summary
Cancer Registrations	Introduction
Unequal Impact – Maori and Non-Maori cancer statistics	Health Indicators
Mental Health	Mortality
Ambulatory Sensitive Hospitalisation	Hospitalisation Data
Suicide and Intentional Self	Appendix
Obesity	References

New additions/updated sections in the document have been highlighted and are in the summary (pages 2-8) and between page 28 and 73 as well as some tables in the appendix.

NMDHB is doing well in areas such as our low Amenable Mortality and Ambulatory Sensitive Hospitalisation rates. Points to note with respect to improving the health of the NMDHB population include:

1. Deaths

The top three causes of death for the NMDHB population are shown in Table 2.

Table 2 Top 3 causes of death in the NMDHB population 2003-2007

Subcategory description	Deaths 2003-2007	%
I20–I25 Ischaemic heart diseases	1125	21.5%
I60–I69 Cerebrovascular diseases	501	9.6%
C15–C26 Malignant neoplasms of digestive organs	459	8.8%
All deaths	5239	100%

Death by intentional self harm is the leading single cause of death in the 15-24 and the 25-44 age groups of NMDHB residents. Nelson Marlborough is right on the national rate for all age groups for suicide, but this is unexpectedly high bearing in mind the

- lower proportion of the population who live in the most deprived quintile than in New Zealand as a whole (7.3% of NMDHB residents, 20% of New Zealand residents)
- lower percentage Maori population than New Zealand as a whole (8.4% compared with 14.0).

(Being Maori and being more deprived increases risk of suicide, so NMDHB has a higher suicide rate than expected.)

2. Suicide and intentional self harm

NMDHB has the second highest rate of hospital admission for intentional self harm in New Zealand.

3. Premature deaths (age less than 65)

Between 2003 and 2007,

- 61% of Maori NMDHB resident deaths (113 out of 186) were premature
- 17% of non Maori NMDHB resident deaths (878 of 5052) were premature.

4. Cancer

NMDHB has higher registration rates than New Zealand as a whole for some cancers. Not all of these result in a higher death rate. (Table 3)

Table 3 Selected cancer Registration and death rates

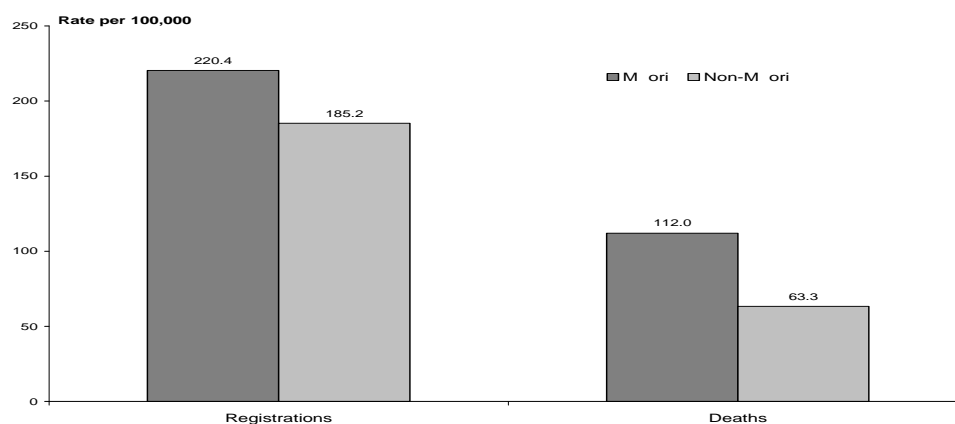
Cancer	Cancer Registration compared to New Zealand rate	Death rate compared to New Zealand rate
malignant neoplasm of the prostate	higher	Slightly lower
colorectal cancer	Slightly higher	Slightly higher
malignant melanoma	higher	higher

5. Maori Cancer

For Maori nationally, the age-sex-standardised incidence rate for all cancers combined for the period 2002-2006 was 220.4 per 100,000, 19% higher than the non-Maori rate of 185.2 per 100,000. The cancer death rate for this period was

112.0 per 100,000 for Maori, 78% higher than the rate for non-Maori of 63.3 per 100,000 (Figure 1.)

Figure 1 Maori and non Maori Cancer Registration and Cancer Death Rates



6. Hospitalisations

Medical abortions were the leading cause for admission in the 15-24 and the 25-44 age groups. Looking at all discharges, the most common cause of hospitalisation relate to the block of ICD10 codes titled “Injury, poisoning and certain other consequences of external causes”; this is mostly injuries such as fractures but the top two diagnoses are “Wound infection following a procedure” (4.3% of the ICD10 block discharges) and “Haemorrhage and haematoma complicating a procedure, not elsewhere classified” (2.8% of the ICD10 block discharges).

7. Obesity

While NMDHB appears not to have high rates of obesity compared with the rest of New Zealand, New Zealand has a high rate of obesity compared to other developed countries. Action on this important modifiable risk factor would have a significant impact on the health of the NMDHB resident population by working upstream for diseases such as type 2 diabetes mellitus, ischaemic heart disease and ischaemic stroke.

8. Health Status Survey – European Quality of Life-5 Dimensions (EQ-5D) Nelson Bays Primary Health

The report for the survey is still in draft so information from it has not been included in the Health Needs Assessment. However, it is an informative piece of work. The outstanding feature is the significant number of people with problems relating to the health dimension of Pain/Discomfort. This is the number one self-reported health issue when data are analysed by gender, age, ethnicity, deprivation status and Territorial Land Agency. However, the number of people who reported **severe** problems is very low (1.9%).

Note: the actual Health Needs Assessment is enclosed as a separate document.

GLOSSARY OF TERMS

ABC	Ask about their smoking status; brief advice to quit; cessation
A4HC	Action for Healthy Children
A&D / AOD	Alcohol and Drug / Alcohol and Other Drugs
ACC	Accident Compensation Corporation
ACNM -	Associate Charge Nurse Manager
ACU	Ambulatory Care Unit
AE	Alternative Education
AEP	Accredited Employer Programme
AIR	Agreed Information Repository
ALOS	Average Length of Stay
AOD	Alcohol and Drug
AOHS	Adolescent Oral Health Services
ARC	Aged Residential Care
ARF	Audit Risk and Finance
ARCC	Aged Residential Care Contract
ASD	Autism Spectrum Disorder
ASMS	Association of Salaried Medical Specialists
AT&R	Assessment, Treatment & Rehabilitation
BSCQ	Balanced Score Card Quadrant
BA	Business Analyst
BCTI	Buyer Created Tax Invoice
BFCI	Breast Feeding Community Initiative
BFCI	Baby Friendly Community Initiative
BS	Business Support
BSI	Blood Stream Infection
CAMHS	Child and Adolescent Mental Health Services
CBAC	Community Based Assessment Centres
CBF	Capitation Based Funding
CE (CEO)	Chief Executive (Chief Executive Officer)
CEA	Collective Employee Agreement
CDHB	Canterbury District Health Board
CCDHB	Capital & Coast District Health Board (also called C & C)
CCF	Chronic Conditions Framework
CCU	Coronary Care Unit
CDEM	Civil Defence Emergency Management
CDHB	Canterbury District Health Board
CDM	Chronic Disease Management
CEG	Coordinating Executive Group (for emergency management)
CFA	Crown Funding Agreement <u>or</u> Crown Funding Agency
CFO	Chief Financial Officer
CHFA	Crown Health Financing Agency
CHS	Community Health Services
CIMS	Coordinated Incident Management System
CIO	Chief Information Officer
CME	Continuing Medical Education
CMI	Chronic Medical Illness
CMS	Contract Management System
CNM	Charge Nurse Manager
COO	Chief Operating Officer

COPMI	Children of Parents with Mental Illness
CPHAC	Community and Public Health Advisory Committee
CPIP	Community Pharmacy Intervention Project
CPNE	Continuing Practice Nurse Education
CPU	Critical Purchase Units
CSR	Contract Status Report
CSSD	Central Sterile Supply Department
CTA	Clinical Training Agency
CTC	Contributions to Cost
CTANAG	Clinical Training Agency Nursing Advisory Group
CTU	Combined Trade Unions
CVD	Cardiovascular Disease
CVDRA	Cardiovascular/Diabetes Risk Assessment
CWD	Case Weighted Discharge
CYAERG	Child Youth Advisory & Expert Reference Group.
CYF	Child, Youth and Family
CYFS	Child, Youth and Family Service
DAP	District Annual Plan
DAR	Diabetes Annual Review
DHB	District Health Board
DHBNZ	District Health Boards New Zealand
DHBRF	District Health Boards Research Fund
DiSAC	Disability Support Advisory Committee
DGH	Director General of Health
DMH	Director of Maori Health
DNA	Did Not Attend
DRG	Diagnostic Related Group
DSP	District Strategic Plan
DSS	Disability Support Services
DWCSP	District Wide Clinical Services Plan
EAP	Employee Assistance Programme
EBID	Earnings Before Interest & Depreciation
ECWD	Equivalent Case Weighted Discharge
ED	Emergency Department
EDA	Economic Development Agency
EFI	Energy For Industry
ELT	Executive Leadership Team
EOI	Expression of Interest
ENT	Ears, Nose and Throat
ESA	Electronic Special Authority
ESOL	English Speakers of Other Languages
ESPI	Elective Services Patient Flow Indicators
ESR	Environmental Science & Research
ESU	Enrolled Service Unit
FF&E	Furniture, Fixtures and Equipment
FFT	Future Funding Track
FMIS	Financial Management Information System
FOMHT	Friends of Motueka Hospital Trust
FOUND	Found Directory is an up-to-date listing of community groups and organisations in Nelson/Tasman
FRC	Fee Review Committee
FSA	First Specialist Assessment
FST	Financially Sustainable Threshold
FTE	Full Time Equivalent

FVIP	Family Violence Intervention Programme
GM	General Manager
GMS	General Medical Subsidy
GP	General Practitioner
GRx	Green Prescription
HAC	Hospital Advisory Committee
HBI	Hospital Benchmarking Information
HBSS	Home Based Support Services
HBT	Home Based Treatment
H&DC / HDC	Health and Disability Commissioner
HDSP	Health & Disability Services Plan Programme
HDU	High Dependency Unit
HEA	Health Education Assessments
He Kawenata	Covenant, agreement, treaty, testament (PM Ryan Maori Dictionary pg 104)
HEeADSSS	Psychosocial tool – Home, Education, eating, Activities, Drugs and Alcohol, Sexuality, Suicidality (mood), Safety
HEHA	Healthy Eating Healthy Action
HEP	Hospital Emergency Plan
HESDJ	Ministries of Health, Education, Social Development, Justice
HFA	Health Funding Authority
HHS	Hospital and Health Services
HIA	Health Impact Assessment
HM	Household Management
HMS	Health Management System
HODs	Heads of Department
HOP	Health of Older People
HPI	Health Practitioner Index
HPV	Human Papilloma Virus
HR	Human Resources
HR & OD	Human Resources and Organisational Development
IANZ	International Accreditation New Zealand
IBA	Information Builders of Australia
IDF	Inter District Flow
IDSS	Intellectual Disability Support Services
IFRS	International Financial Reporting Standards
IHB	Iwi Health Board
IM	Information Management
InterRAI	Inter Residential Assessment Instrument
IPAC	Independent Practitioner Association Council
IPC	Intensive Patient Care
IPC Units	Intensive Psychiatric Care Units
IPG	Immunisation Partnership Group
IPU	In-Patient Unit
IS	Information Systems
ISSP	Information Services Strategic Plan
IT	Information Technology
JAMHWSAP	Joint Action Maori Health & Wellness Strategic Action Plan
KIM	Knowledge and Information Management
Kotahitanga	Unity, accord, coalition, solidarity (PM Ryan Maori Dictionary pg 127)
KPI	Key Performance Indicator
KHW	Kimi Hauora Wairau (Marlborough PHO)
LA	Local Authority
LCN	Local Cancer Network

LIS	Laboratory Information Systems
LOS	Length of Stay
LSCS	Lower Segment Caesarian Section
LTC	Long Term Care
LTCCP	Long Term Council Community Plan
LTSFSG	Long Term Service Framework Steering Group
Manaakitanga	Goodwill, show respect, or kindness to ((PM Ryan Maori Dictionary pg 172)
Manawhenua	Power, prestige, authority over land (HW Williams Maori Dictionary pg 172)
Manawhenua O Te	Tau Ihu O Te Waka A Maui – Referring to the eight iwi who hold tribal authority over the top of the South Island (no reference)
MHDSF	Maori Health and Disability Strategy Framework
MHFS	Maori Health Foundation Strategy
MPDS	Maori Provider Development Scheme
MA	Medical Advisor
MCT	Mobile Community Team
MDC	Marlborough District Council
MDO	Maori Development Organisation
MDS	Maori Development Service
MDT	Multi Disciplinary Team
MECA	Multi Employer Collective Agreement
MHAU	Mental Health Admission Unit
MHC	Mental Health Commissioner
MHD	Maori Health Directorate
MHINC	Mental Health Information Network Collection
MHWSF	Maori Health and Wellness Strategic Framework
MOH	Ministry of Health
MOH	Medical Officer of Health
MOA	Memorandum of Agreement
MOSS	Medical Officer Special Scale
MOU	Memorandum of Understanding
MOW	Meals on Wheels
MRI	Magnetic Resonance Imaging
MRT	Medical Radiation Technologist (or Technician)
MSD	Ministry of Social Development
NPA	Nutrition and Physical Activity
NRAHDD	Nelson Region After Hours & Duty Doctor Limited
NRT	Nicotine Replacement Therapy
MRSA	Methicillin Resistant Staphylococcus Aureus
NHBIT	National Health Board IT
NASC	Needs Assessment Service Coordination
NBPH	Nelson Bays Primary Health
NCC	National Capital Committee
NCC	Nelson City Council
NCSP	National Cervical Screening Programme
NGO	Non Government Organisation
NHCC	National Health Coordination Centre
NHI	National Health Index
NIR	National Immunisation Register
NMDHB	Nelson Marlborough District Health Board
NMDS	National Minimum Dataset
NMIT	Nelson Marlborough Institute of Technology
NPA	Nutrition and Physical Activity (Programme)

NPV	Net Present Value
NRAHDD	Nelson Regional After Hours and Duty Doctor Ltd
NSU	National Screening Unit
NTOS	National Terms of Settlement
NZHIS	NZ Health Information Services
NZMA	New Zealand Medical Association
NZNO	NZ Nurses Organisation
NZPH&D Act	NZ Public Health and Disability Act 2000
OAG	Office of the Auditor General
OIA	Official Information Act
OIS	Outreach Immunisation Services
OPD	Outpatient Department
OPF	Operational Policy Framework
OPJ	Optimising the Patient Journey
OSH	Occupational Health and Safety
OT	Occupational Therapy
PACS	Picture Archiving Computer System
P&F	Planning and Funding
PANT	Physical Activity and Nutrition Team
PBF(F)	Population Based Funding (Formula)
PC	Personal Cares
P&C	Primary & Community
PCI	Percutaneous Coronary Intervention
PCO	Primary Care Organisation
PCT	Pharmaceutical Cancer Treatments
PDR	Performance Development Review
PDRP	Professional Development and Recognition Programme
PDSA	Plan, Do, Study, Act
PFG	Performance Framework Group (formerly known as Services Framework Group)
PHS	Public Health Service
PHCS	Primary Health Care Strategy
PHI	Public Health Intelligence
PHO	Primary Health Organisation
PHOA	PHO Alliance
PHONZ	PHO New Zealand
PHS	Public Health Service
PHU	Public Health Unit
PIA	Performance Improvement Actions
PN	Practice Nurse
PPP	PHO Performance Programme
PSAAP	PHO Service Agreement Amendment Protocol
PT	Patient
PTAC	Pharmacology and Therapeutics Committee
PRIMHD	Project for the Integration of Mental Health Data
PVS	Price Volume Schedule
QA	Quality Assurance
QHNZ	Quality Health NZ
QIC	Quality Improvement Council
Rangatiratanga	Autonomy, evidence of greatness (HW Williams Maori Dictionary pg 323)
RDA	Resident Doctors Association
RDA	Riding for Disabled
RIF	Rural Innovation Fund

RFI	Request for Information
RFP	Request for Proposal
RICF	Reducing Inequalities Contingency Funding
RM	Registered Midwife
RMO	Resident Medical Officer
RN	Registered Nurse
ROI	Registration of Interest
RSE	Recognised Seasonal Employer
RSL	Research and Sabbatical Leave
SAN	Storage Area Network
SCBU	Special Care Baby Unit
SCN	Southern Cancer Network
SDB	Special Dental Benefit Services
SHSOP	Specialist Health Services for Older People
SICF	South Island Chairs Forum
SICSP	South Island Clinical Services Plan
SI HSP	South Island Health Services Plan
SIRCC	South Island Regional Capital Committee
SISSAL	South Island Shared Service Agency
SLH	SouthLink Health
SLT	Strategic Leadership Team
SMO	Senior Medical Officer
SNA	Special Needs Assessment
SOI	Statement of Intent
SOPD	Surgical Outpatients Department
SOPH	School of Population Health
TDC	Tasman District Council
TLA	Territorial Local Authority
TOW	Treaty of Waitangi
TOR	Terms of Reference
TRTT	Te Roopu Tupu Tahī
UG	User Group
VLCA	Very Low Cost Access
VRA	Vascular Risk Assessment
WAM	Wairau Accident & Medical Trust
WAVE (Project)	Working to Add Value through E-Information
WEII	Whanau Engagement, Innovation and Integration
YTD	Year to Date
YTS	Youth Transition Service

October 2010

Nelson Marlborough District Health Board

Health Needs Assessment

2008 updated 2010

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1. Summary

This Health Needs Assessment (HNA) report was provided to NMDHB by the Health and Disability Intelligence Unit of the Ministry of Health in 2008 and has been updated by Nelson Marlborough District Health Board (NMDHB) in October 2010. It provides a profile of the NMDHB Population and Summary Health Indicators. This is not a comprehensive report and should be regarded as a starting point. It is aimed at assisting NMDHB with planning and prioritisation of the limited publicly funded resources with the goal of creating health gains for the people who reside in the district.

The structure and some of the key findings of this report are summarised below.

1.1 Census data

1.1.1 Census Night Population

- In the absence of further census data since 2006, the population data have not been updated.
- The resident population of NMDHB was just over 130,000 at the time of the 2006 Census¹ but the population in the area on Census night was nearly 140,000. This suggests that there is a higher population in the summer months and this must be taken into account when planning health services.

1.1.2 Population Age Structure

- The NMDHB population has a slightly older age-structure compared with New Zealand as a whole. Marlborough District has a high proportion of people aged 65 years or more and Nelson City has a high proportion aged 85 years or more. Efficient and effective health and disability support services for older people are clearly an important priority.

1.1.3 Population Change

- Between 2001 and 2006 the NMDHB population increased by 6.2%. The fastest growth rate was in Tasman District (7.9%) followed by Marlborough District (7.6%).
- Some Census Area Units had growth rates of over 25% between 2001 and 2006 including: Aniseed Hill, Ngawhatu, Whangamoia, Brightwater, Saxton and Wakefield.
- Population estimates suggest that the child and youth populations decreased slightly between 2001 and 2006 but during the same time period there was significant growth among the older adult population (40-64) and older people (65+).
- Population estimates show that the Maori population in the NMDHB area increased at a slightly faster rate than the non-Maori population between 2001 and 2006. The growth in the Maori population was fastest for people aged 65 years or more followed by people aged 40-64.

1.1.4 Population Projections

- Population projections show that the overall population of NMDHB is expected to increase by nearly 10% between 2006 and 2026.
- A reduction in the population is expected for all age groups under 50 years. However, the pattern is different for the Maori population because for Maori growth is expected in nearly all age groups less than 50 years
- The rate of population growth is expected to be fastest among the oldest age groups for both Maori and non-Maori.
- Population projections show that the population growth rate for NMDHB is expected to reduce in the next two decades. The growth rate is projected to be 3.8% between 2006

and 2011 (or 0.8% per annum) which is slower than the growth between 2001 and 2006. The fastest growth between 2006 and 2011 is expected to be in Tasman District (4.8%).

1.1.5 Socio-economic Deprivation

- A lower proportion of the NMDHB population live in the most deprived quintile compared with New Zealand as a whole (7.3% of the NMDHB population live in Quintile 5 areas compared with about 20% for New Zealand).
- Nelson City has the highest proportion of its population living in Quintile 5 areas (14.4%).
- Tasman (21.6%) and Marlborough (21.2%) have the highest proportion living in Quintile 1 Areas (least deprived).
- The Census Area Units in the NMDHB area with the highest deprivation levels have average decile ratings of 9 including the following census area units: Isel Park, Toi Toi, Tapawera, and Broads.

1.1.6 Socio-economic Indicators

- NMDHB scores well on most socio-economic indicators including positive results relative to New Zealand for unemployment, low income earners, telephone access, motor vehicle access, home ownership and household crowding.
- The only negative indicator was a low level of NCEA Level 2 certificate (or higher) gained at school.

1.1.7 Socio-demographic Profile

Analysis of socio-demographic data shows that compared with New Zealand as a whole the NMDHB has a:

- lower proportion of the population born overseas
- lower proportion who had never been married or joined a civil union
- higher proportion who had been separated, divorced, widowed or bereaved
- higher proportion with no educational qualifications.
- lower proportion of the population who are unemployed
- slightly higher proportion of the labour force employed part time
- higher proportion of labourers in the work force
- lower proportion of one parent families with children
- slightly higher proportion of one person households
- slightly lower proportion with access to a cellphone or mobile phone
- slightly lower proportion with no access to a motor vehicle
- slightly lower proportion of NMDHB people are living in dwellings they do not own
- slightly lower average number of people per dwelling
- lower proportion of families receiving domestic purposes benefits or unemployment benefits
- higher proportion of families receiving invalids benefit
- lower proportion of households with six or more usual residents
- slightly higher proportion who worked 60 hours or more per week
- higher proportion who biked, walked or jogged to work
- slightly lower proportion who were regular smokers

1.2 Health Status Indicators

The Health Indicators outlined in the last version of the Health Needs Assessment were updated, based on rates calculated by the Health and Disability Intelligence Unit of the Ministry of Health, in late 2008². For many of the health indicators reviewed the NMDHB rate was similar to the New Zealand rate.

NMDHB rates were high relative to New Zealand for the following indicators:

- Overall cancer
- Breast cancer
- Melanoma
- Musculoskeletal disease
- Elective surgery

NMDHB rates were low relative to New Zealand for the following indicators:

- Avoidable hospitalisation
- Cardiovascular disease
- Asthma
- Chronic Obstructive Pulmonary Disease (COPD)
- Diabetes
- Renal failure
- Stroke
- Self-harm
- *Burns*
- *Unintentional injury*

Burns and unintentional injury are in italics because the rates were so low for Nelson Marlborough DHB that they suggest that there may be something different from other parts of New Zealand in the way in which injury cases are hospitalised or in the way these hospital admissions are recorded in Nelson Marlborough DHB.

Similar analysis is no longer being performed by the Health and Disability Intelligence Unit. Hospitalisations, Mortality and Cancer are dealt with in the relevant sections of this document. NMDHB disease notifications rates when compared with the whole of New Zealand rate shows only two diseases which have a higher rate for NMDHB than for the whole of New Zealand, Pertussis which is statistically significantly higher than New Zealand as a whole and Salmonellosis which is not significant.

1.3 Mortality

1.3.1 Life Expectancy

- Life expectancy³ improved for all districts between 2000/02 and 2005/7
- Tasman District has the longest life expectancy at birth for both males and females and Nelson City shares the top spot for males.
- Marlborough District has the shortest life expectancy for males
- All 3 Territorial Authority (TAs) areas are very similar in terms of life expectancy at birth and all are slightly longer than New Zealand as a whole for males but only Tasman District is longer for females.

1.3.2 Overall Mortality

- The overall mortality rates³ reduced between 2000/02 and 2005/07.
- These data show that there was a reduction in the overall mortality rate between 2000/02 and 2005/07 in all Territorial Authorities in the NMDHB area. Tasman District has the lowest mortality rate with Nelson City and Marlborough District with a slightly higher rate.

1.3.3 Main Causes of Death

The following types of conditions⁴ were the leading causes of death in the NMDHB population as a whole over the 5 year period 2003-2007:

- Acute myocardial infarction (621 deaths, 11.8%)
- Chronic ischaemic heart disease (492 deaths, 9.4%)

- Other chronic obstructive pulmonary disease (266 deaths, 5.1%)
- Malignant neoplasm of bronchus and lung (248 deaths, 4.7%)
- Stroke, not specified as haemorrhage or infarction (243 deaths, 4.6%)
- Malignant neoplasm of colon (162 deaths, 3.1%)

The main causes of death for each age group are summarised in Table 1.

Table 1 Main causes of death for each age group

Age Group	Cause of death
Children (0-14)	Extreme immaturity (pre-term/ low-birthweight babies)
Young people (15-24)	Motor vehicle crashes and intentional self-harm
Young adults (25-44)	Cancers and Intentional self-harm
Older adults (45-64)	Cancers and ischaemic heart disease
Older people (65+)	Cancers, ischaemic heart disease, Chronic lower respiratory diseases and stroke

1.3.4 Premature Death

- Nearly 20% of the NMDHB population die before the age of 65 years.
- A much higher proportion of Maori (60%) die before the age of 65 compared with non-Maori (17%).

Leading causes of premature death⁴ include:

- Heart attacks and ischaemic heart disease
- Cancers of the breast, lung and colon
- Chronic obstructive pulmonary disease
- Suicide
- Motor vehicle crashes

1.4 Amenable Mortality

Amenable mortality is defined as deaths from those conditions for which variation in mortality rates (over time or across populations) reflects variation in the coverage and quality of health care (itself defined as preventive or therapeutic services delivered to individuals or families). It measures mortality that could potentially have been avoided given timely access to quality healthcare.

Overall the analysis indicated that while several DHBs may be performing slightly less well than expected (in that their fully adjusted amenable mortality rates fall into the upper tertile (or third) of rates), others (Waitemata and Nelson–Marlborough) may be performing slightly better than expected.

1.5 Cancer Registrations

A comparison of NMDHB⁵ with New Zealand⁶ as a whole is made in terms of age standardised rates for cancer registration of selected common cancer types. NMDHB has a slightly higher rate of registration for all causes and colorectal cancer and a more markedly higher rate for malignant melanoma and malignant neoplasm of the prostate.

The NMDHB⁴ death rate is not higher than the national rate⁷ for Malignant neoplasm of the prostate in spite of the high registration rate. This may be because NMDHB healthcare is more efficient at both registering and treating this cancer. The higher NMDHB rate for Malignant melanoma of the skin is more of a concern. The NMDHB age standardised death rate⁴ (2003-2007) is higher than the national⁷ rate for 2007. This might be partly because of

NMDHB's low Maori population percentage (Maori have rates of malignant melanoma so low that it is not possible to calculate a standardised death rate) but may be the price we pay for being the sunshine capital of New Zealand.

1.6 Unequal Impact – Maori and non Maori cancer statistics

There are significant disparities in the incidence rate for all cancers combined between Maori and non-Maori. These have been analysed at a national level⁸. For Maori, the age-sex-standardised incidence rate for all cancers combined was 220.4 per 100,000, 19% higher than the non-Maori rate of 185.2 per 100,000. The cancer death rate for 2002-2006 was 112.0 per 100,000 for Maori, 78% higher than the rate for non-Maori of 63.3 per 100,000

1.7 Main Causes of Hospitalisation

The main causes of hospitalisation⁹ include:

- Injury, poisoning and certain other consequences of external causes
- Factors influencing health status and contact with health services
- Neoplasms
- Diseases of the circulatory system
- Diseases of the digestive system
- Pregnancy, childbirth and the puerperium
- Symptoms, signs and abnormal clinical and laboratory findings

The leading category in the list above, "Injury, poisoning and certain other consequences of external causes", includes: Wound infection following a procedure (4.3%), Haemorrhage and haematoma complicating a procedure, not elsewhere classified (2.8%), Unspecified injury of head (2.2%), Fracture of subcapital section of femur (2.1%), Fracture of nasal bones (1.8%), Fracture of intertrochanteric section of femur (1.8%) and others including injuries..

The five main causes of hospitalisation for each age group are listed in Table 2:

Table 2 Main causes of hospitalisation for each age group

Age Group	Causes of hospitalisation
0-14 years	Births, dental caries, asthma, Acute upper respiratory infection
15-24 years	Medical abortions, childbirth and childbirth related issues, abdominal pain, appendicitis and tonsillitis
25-44 years	Medical abortions, childbirth and childbirth related issues, sterilisation, complications of pregnancy,
45-64 years	Chest pain, abnormal heart rhythm, angina, heart attacks, Malignant neoplasm of skin
65-74 years	Chest pain, abnormal heart rhythm, Cataract, Malignant neoplasm of skin, rehabilitation, heart attacks, coxarthrosis , gonarthrosis , angina
75-84 years	Rehabilitation, cataracts, abnormal heart rhythm, chest pain, Pneumonia, heart attacks, Malignant neoplasm of skin,
85 + years	Rehabilitation, cataracts, congestive heart failure, pneumonia, Urinary tract infection

1.8 Ambulatory Sensitive Hospitalisation

Ambulatory sensitive hospitalisations are hospital admissions that could potentially have been avoided through community based or primary health care services.

Table 3 shows the main causes of ambulatory sensitive hospitalisation for the three age groups chosen by the Ministry of Health for monitoring this health target.

Table 3 Main Causes of Ambulatory Sensitive Hospitalisation for the Year to end March 2010

Age Group	Main Causes of Ambulatory Sensitive Hospitalisation
0-4 Years	ENT infections, Dental conditions
45-64 Years	Angina and chest pain, cellulitis
0-74 Years	Dental conditions, Angina and chest pain

ASH rates for NMDHB are significantly lower than rates for New Zealand as a whole for the 45-64 and 0-74 age groups. They are lower than New Zealand as a whole for Maori 0-4, although not significantly and on a par with New Zealand as a whole for "other" 0-4.

1.9 Suicide and Intentional Self Harm

Mortality data show that NMDHB had a higher rate of suicide (2003-2007) as a cause of death than New Zealand as a whole in 2007. Nelson Marlborough also has the second highest rate of hospitalisations per 100,000 for intentional self harm. National data and trends¹⁰ are outlined in this section.

1.10 Obesity

Obesity is one of the most important modifiable risk factors for a number of major diseases, including type 2 diabetes mellitus, ischaemic heart disease, ischaemic stroke and several common cancers. Three sources of data for Nelson Marlborough are outlined in this section which overall indicate that the NMDHB population has a prevalence of obesity either at or below the national rate.

1.11 Key Results from the New Zealand Health Survey, 2006/07

This survey has not been repeated since the last versions of the Health Needs Assessment.

The sample size of the New Zealand Health Survey was too small to enable direct survey estimates to be published for small individual DHBs. Results were therefore published for groupings of DHBs.

NMDHB was included in the "Other South Island DHBs" grouping which included the following DHBs: Nelson-Marlborough, West Coast, South Canterbury, Otago and Southland. It is expected that these grouped DHB survey estimates will give a reasonably accurate indication of what results would be for NMDHB.

The adult results showed that compared with New Zealand as a whole, a significantly higher proportion of this DHB grouping:

- Eat three or more servings of vegetables a day
- Undertake regular physical activity
- Had visited an emergency department at a public hospital in the past 12 months

A significantly lower proportion of this DHB grouping:

- Were obese or overweight
- Had never tried smoking
- Had unmet need for oral health care in past 12 months

The child results showed that compared with New Zealand as a whole, a significantly higher proportion of this DHB grouping:

- Had seen an oral health care worker in past 12 months

- Had visited an emergency department at a public hospital in the past 12 months

A significantly lower proportion of this DHB grouping:

- Had never seen an oral health care worker
- Had never had a filling (carries free)

Synthetic Predictions which provided estimates for individual DHBs based on statistical modelling showed that there were no indicators for which the NMDHB rate was statistically significantly higher than the rate for New Zealand as a whole.

However, compared with New Zealand, NMDHB had a statistically significantly lower rate for:

- Diabetes prevalence for the overall population
- Proportion of the population who are currently taking medication for high blood cholesterol (for the overall population and for non-Maori)

2. Introduction

This document is an update to the 2008 Health Needs Analysis. It aims to provide NMDHB with demographic and health status information for district annual planning and district strategic planning.

This report summarises demographic information into a population profile and collates basic health indicator and health status data. It includes the following types of information:

- Population structure by age, gender and ethnicity
- Recent population change
- Population projections
- Socio-economic deprivation (NZDep2006)
- Socio-economic indicators
- Socio-demographic profile
- Health status indicators
- Life expectancy
- Overall mortality
- Main causes of death
- Premature death
- Amenable Mortality
- Cancer Registration
- Unequal Impact – Maori and Non-Maori cancer statistics
- Main causes of hospitalisation
- Ambulatory sensitive hospitalisation
- Suicide and Intentional Self Harm
- Obesity
- Key results from the New Zealand Health Survey, 2006/07

Future analyses will be conducted to provide additional Health Needs Assessment information which focuses on key specific issues of interest to NMDHB. For example, this may include analysis of issues such as:

- Chronic conditions
- Projections of expected future levels of hospital utilisation
- Co-morbidity
- Complexity of hospital utilisation
- Avoidable mortality

3. Population Profile

This section provides an overview of the population served by the Nelson Marlborough District Health Board (NMDHB). The following types of information are included:

- A summary of 2006 Census Population numbers by age, area and ethnicity.
- A description of recent population changes by local government authority areas and census area units.
- Population estimates by age and ethnicity
- Population projections by age, area and ethnicity
- Socio-demographic data from the 2006 Census including for example educational level, labour force status, benefit recipients, income levels, family types, household composition, access to Motor Vehicles, housing tenure, population per dwelling, tobacco smoking.
- Information on socio-economic deprivation based on NZDep2006
- Socio-economic indicators from the 2007 report by Public Health Intelligence “An indication of New Zealanders Health” (Ministry of Health, 2007)

It should be noted that in the population data tables in this report and in the appendix, totals sometimes vary. This is because of the way Statistics New Zealand rounds data to multiples of three to protect the confidentiality and anonymity of respondents to the Census.

3.1 Outline

Nelson Marlborough District Health Board (NMDHB) serves a population of just over 130,000 people. About one third of the population live in each of the following three local government authority areas:

- Tasman District
- Nelson City
- Marlborough District

The total land area of NMDHB is 20,517 square kilometres and 77.6% of the NMDHB population live in urban areas.

The main population centres are:

- Nelson City (43,000)
- Blenheim (28,000)
- Richmond (12,000)
- Motueka (7,000)
- Brightwater and Wakefield (2,000)
- Mapua (2,000)
- Takaka (1200)
- Murchison (700)

Map of the NMDHB Area



3.2 2006 Census Population

At the time of the 2006 Census¹¹ just over 130,000 people lived in the NMDHB area. Approximately one third lived in each of the three local government authority areas (Table 4)

Table 4 2006 Census Usually Resident Population

Age	Tasman District	Nelson City	Marlborough District	NMDHB
0-14	9600	8241	7920	25761
15-44	16248	17025	15498	48771
45-64	12702	11385	12252	36339
65-74	3351	3045	3741	10137
75-84	2061	2349	2421	6831
85+	669	843	708	2220
Total	44631	42888	42540	130059

- The NMDHB population has a slightly older age-structure compared with New Zealand as a whole.
- 14.8% of the NMDHB population are aged 65 years or more compared with 12.3% for New Zealand as a whole.
- Only 19.8% of the NMDHB population are aged 0-14 years compared with 21.5% for New Zealand as a whole.
- Tasman District has the highest proportion of children with 21.5% of the population aged 0-14 years which is identical to the proportion for New Zealand as a whole.
- Marlborough District has the highest proportion of older people with 16.1% of the population aged 65+ compared with 12.3% for New Zealand as a whole.
- Nelson City has the highest proportion of the oldest age group with 2.0% of the population aged 85+ compared with 1.4% for New Zealand as a whole.

Table 5 2006 Census Usually Resident Population, Distribution by Age (Percent)

Age	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
0-14	21.5	19.2	18.6	19.8	21.5
15-44	36.4	39.7	36.4	37.5	42.3
45-64	28.5	26.5	28.8	27.9	23.8
65-74	7.5	7.1	8.8	7.8	6.6
75-84	4.6	5.5	5.7	5.3	4.3
85+	1.5	2.0	1.7	1.7	1.4
Total	100.0	100.0	100.0	100.0	100.0
65+	13.6	14.5	16.1	14.8	12.3

3.2.1 Ethnicity

There are several different ways of classifying ethnicity. The data in this section is based on the prioritised ethnicity approach. People are able to select more than one ethnic group in their response to the ethnicity question in the Census and the prioritised ethnicity approach assigns people to an ethnic group based on a decision algorithm. For example, using this approach people who have chosen Maori as any one of their ethnic groups are defined as Maori regardless of how many other ethnic groups they have selected. It is useful for statistical analyses to consider the ethnicity of the population simply in terms of Maori and non-Maori because of the small numbers of people residing in the NMDHB area who are Pacific Island people, Asian or from other ethnic groups. This analysis shows that:

- Nearly one in ten (8.4 %) people in the NMDHB population are Maori compared with 14.0% for New Zealand as a whole.

- The Maori population is much younger than the non-Maori population
- 34.8% of Maori are aged 0-14 compared with 18.4% of non-Maori.
- 4.0% of Maori are aged 65 or more compared with 15.7% for non-Maori.
- Although there are over 2200 people aged 85 or more in the NMDHB population, very few of them are Maori.

Table 6 2006 Census NMDHB Usually Resident Population by Ethnicity

	NMDHB Maori	NMDHB % Maori	NMDHB non-Maori	NMDHB % non Maori	NMDHB Total	NZ % Maori
0-14	3801	14.7%	21972	85.3%	25773	23.0%
15-24	1929	13.1%	12762	86.9%	14691	17.7%
25-44	2979	8.7%	31107	91.3%	34086	13.5%
45-64	1782	4.9%	34560	95.1%	36342	9.1%
65-74	300	3.0%	9840	97.0%	10140	6.3%
75-84	123	1.8%	6708	98.2%	6831	3.2%
85+	9	0.4%	2202	99.6%	2211	1.6%
Total	10923	8.4%	119151	91.6%	130074	14.0%

More detailed ethnicity data shows that over 2000 people identified as Asian ethnicity, over 1200 were Pacific Island people and over 400 identified as Middle Eastern/Latin American/African (MELAA). Over 70 % of the population were European, over 8% were Maori and over 17% identified with other ethnic groups.

Table 7 2006 Census Usually Resident Population by Ethnicity

	Asian	European	Maori	MELAA	Other	Pacific	Total
0-14	507	16932	3801	114	3990	438	25773
15-24	384	9957	1929	84	2070	246	14691
25-44	828	23325	2979	183	6378	384	34086
45-64	372	26415	1782	42	7554	180	36342
65-74	30	8088	300	0	1701	33	10140
75-84	12	5985	123	6	702	9	6831
85+	3	1986	9	0	204	0	2211
Total	2136	92688	10923	429	22599	1290	130074

3.2.2 Multiple Response Ethnicity

The data below shows the population by ethnicity for the NMDHB area based on the multiple responses people were able to make to the ethnicity question in the Census. People were able to choose more than one ethnic group that they identify with. The sum of all the ethnic group populations in these data therefore exceeds the total population.

These data suggest a greater population for some ethnic groups compared with the prioritised ethnicity approach to classification. It also shows that nearly 19,000 people in the NMDHB area identified as “New Zealander”. This is 15% of the NMDHB population and is greater than the proportion of New Zealand as a whole who identified as “New Zealander” (11.1%).

Table 8 Multiple Response Ethnicity, NMDHB, 2006

	Tasman District	Nelson City	Marlborough District	NMDHB
European	35,715	33,504	32,019	101,238
Maori	3,063	3,615	4,275	10,953
Pacific peoples	333	708	642	1,683
Asian	567	1,065	639	2,271
MELAA	108	153	195	456
New Zealander	6,342	5,829	6,624	18,795

	Tasman District	Nelson City	Marlborough District	NMDHB
Other	9	21	9	39
Total people	43,200	41,679	40,830	125,709

3.2.3 Recent Population Change

Data on recent population change in the NMDHB area is summarised below.

- The fastest rate of population growth between 2001 and 2006 was in Tasman District (7.9%), followed by Marlborough District (7.6%).
- Nelson City had the slowest growth rate (3.2%).
- The overall growth rate of NMDHB was 6.2% which was slightly slower than the rate for New Zealand as a whole (7.8%).

Table 9 Population Change by TA, 2001-2006

	1996	2001	2006	%Change 2001-06	Numeric Change 2001-06
Nelson City	40239	41565	42891	3.2%	1326
Tasman District	37971	41352	44625	7.9%	3273
Marlborough District	38397	39555	42549	7.6%	2994
NMDHB	116607	122472	130065	6.2%	7593

3.2.4 Census Area Units

The ten fastest growing Census Area Units in the NMDHB population between 2001 and 2006 had growth rates from 14% to 43%. There was population growth in some parts of Nelson City, Tasman District and Marlborough District.

Table 10 10 Fastest Growing Census Area Units in NMDHB, 2001 – 2006

TA	CAU Name	1996	2001	2006	%Change 2001-06	Numeric Change 2001-06
Tasman	Aniseed Hill	357	435	624	43.4%	189
Nelson	Ngawhatu	636	972	1344	38.3%	372
Nelson	Whangamoa	558	675	870	28.9%	195
Tasman	Brightwater	1239	1425	1791	25.7%	366
Nelson	Saxton	990	1350	1695	25.6%	345
Tasman	Wakefield	1419	1497	1875	25.3%	378
Marlborough	Wairau	3495	3852	4569	18.6%	717
Marlborough	Waikawa	843	987	1158	17.3%	171
Tasman	Mapua	1269	1617	1878	16.1%	261
Marlborough	Omaka	1080	1110	1269	14.3%	159

3.3 Population Estimates

Population estimates from Statistics New Zealand provide an indication of the size of the population on June 30th for 1996, 2001 and 2006.

3.3.5 Age

These data suggest that the child and young adult populations reduced in size slightly between June 2001 and June 2006 and that there was significant growth in the older adult and older people populations in the same time period. Data for smaller age bands show that the fastest growth in the NMDHB area between 2001 and 2006 was among people aged 55-69 years and people aged 80 years or more (see the population estimates section in the Appendix).

It should be noted that with these data, the totals from the broad age-bands presented in the report and the detailed age-group data in the appendix do not match precisely. This is not an error but the way the data is provided when downloaded from the Statistics New Zealand “Tablebuilder¹²” website. This discrepancy may be due to a compounding effect of the base 3 rounding that Statistics New Zealand routinely uses for population data.

Table 11 NMDHB Population Estimates, June 1996 – 2006

	1996	2001	2006	%Change 2001-06	Numeric Change 2001-06
0-14	26300	27100	26100	-3.7%	-1000
15-39	42000	39900	39700	-0.5%	-200
40-64	34700	41200	48100	16.7%	6900
65+	16200	17900	19700	10.1%	1800
Total	119200	126000	133700	6.1%	7700

This pattern is similar to that for New Zealand as a whole except there was a slight increase in the New Zealand child population between 2001 and 2006 (1.3%) and a slight increase in the population of young adults in New Zealand in the same time period (5.4%).

3.3.6 Ethnicity

Population estimate data shows that the Maori population in the NMDHB area increased at a slightly faster rate than the non-Maori population. The growth in the Maori population was fastest for people aged 65 years or more followed by people aged 40-64. While the non-Maori population in the 15-39 age range appears to have reduced slightly, the Maori population in this age group increased by 6%. The population growth rate in the older age groups was faster for Maori than for non-Maori.

Table 12 NMDHB Population Change by Ethnicity, June 2001 – 2006

	Maori % Change 2001-2006	Maori Numeric Change 2001-2006	non-Maori % Change 2001-2006	non-Maori Numeric Change 2001-2006	Total % Change 2001-2006	Total Numeric Change 2001- 2006
0-14	-4%	-170	-4%	-830	-4%	-1000
15-39	6%	270	-1%	-470	-1%	-200
40-64	31%	650	16%	6250	17%	6900
65+	53%	170	9%	1630	10%	1800
Total	8%	900	6%	6800	6%	7700

3.4 Population Projections

- The overall population of NMDHB is expected to increase by 9.8% between 2006 and 2026.
- A reduction in the population is expected for all age groups under 50 years.
- The rate of population growth is expected to be fastest among the oldest age groups.

Table 13 Nelson-Marlborough DHB Projected Population, Total, 2006-2026

	0-14	15-24	25-44	45-64	65-74	75-84	85+	Total
2006	26195	15320	34855	37565	10475	6975	2260	133645
2007	26010	15545	34260	38280	11010	6990	2450	134545
2008	25900	15840	33610	39320	11275	7060	2610	135615

2009	25785	15980	33210	40030	11685	7215	2740	136645
2010	25730	16050	32885	40605	12205	7240	2940	137655
2011	25705	16070	32575	41020	12750	7310	3100	138530
2016	25210	15155	31450	42045	16085	8310	3745	142000
2021	24560	14390	30620	42370	18200	10250	4350	144740
2026	23660	14500	30240	40300	19730	13070	5300	146800

The pattern is different for the Maori population because for Maori growth is expected in nearly all age groups less than 50 years.

The fastest growth rate for Maori is also expected to be in the oldest age groups.

Table 14 Nelson-Marlborough DHB Projected Population, Maori, 2006-2026

	0-14	15-24	25-44	45-64	65-74	75-84	85+	Total
2006	4000	2180	3260	1950	330	140	0	11860
2007	4020	2260	3230	2060	370	140	20	12100
2008	4080	2320	3200	2180	400	160	20	12360
2009	4110	2370	3200	2290	420	180	30	12600
2010	4170	2400	3210	2380	480	180	40	12860
2011	4230	2430	3250	2420	500	190	40	13060
2016	4530	2340	3530	2810	680	290	80	14260
2021	4930	2210	3790	3120	850	430	130	15460
2026	5050	2500	4020	3170	1110	580	200	16630

3.4.7 Population Projections by Local Government Area

Medium population projections from Statistics New Zealand show that although currently about one third of the NMDHB population live in each of the three local government authority areas, Tasman and Marlborough Districts are growing at a faster rate than Nelson City so that in the near future a greater share of the NMDHB population will live in these areas.

Table 15 Population Projections by Local Government Area

	Tasman District	Nelson City	Marlborough District	NMDHB
2006	45800	44300	43600	133700
2011	48000	45700	45100	138800
2016	49800	46900	46300	143000
2021	51400	47900	47200	146500
2026	52800	48700	47600	149100
2031	53900	49300	47700	150900

Notes: These are Statistics New Zealand medium population projections which assume a medium level of fertility, mortality and migration. The projections are for 30 June each year.

The population growth rate for NMDHB is projected to be 3.8% between 2006 and 2011 (or 0.8% per annum) and it is greatest in Tasman District (4.8%).

The population growth rate is expected to reduce in the next two decades.

Table 16 Projected Population Change in each 5 year Period

	Tasman District	Nelson City	Marlborough District	NMDHB
2006-11	4.8%	3.2%	3.4%	3.8%
2011-16	3.8%	2.6%	2.7%	3.0%
2016-21	3.2%	2.1%	1.9%	2.4%
2021-26	2.7%	1.7%	0.8%	1.8%
2026-31	2.1%	1.2%	0.2%	1.2%

3.4.8 Population Projections by Age Group

Population Projections for People aged 0-14 Years

Overall the population in this age group is projected to decline although there is a small amount of growth projected in Tasman District between 2006 and 2011 and between 2026 and 2031.

Table 17 Projected Population Change in each 5 year Period

	Tasman District	Nelson City	Marlborough District	NMDHB
1996-2001	6.6%	4.7%	-2.3%	3.0%
2001-2006	0.0%	-5.6%	-5.9%	-3.7%
2006-2011	1.0%	-1.2%	-1.3%	-0.4%
2011-2016	0.0%	0.0%	-2.5%	-0.8%
2016-2021	-1.0%	-1.2%	-2.6%	-1.6%
2021-2026	-3.1%	-3.7%	-6.7%	-4.3%
2026-2031	1.1%	-2.5%	-5.7%	-2.1%

Population Projections for People aged 15-39 Years

Overall the population in this age group is projected to decline although there is a small amount of growth projected in Tasman District between 2016 and 2026. There is also some growth expected in Marlborough District between 2001 and 2006 for this age group.

Table 18 Projected Population Change in each 5 year Period

	Tasman District	Nelson City	Marlborough District	NMDHB
1996-2001	-1.5%	-5.2%	-8.2%	-5.0%
2001-2006	-1.5%	-2.8%	3.3%	-0.5%
2006-2011	-2.3%	-2.1%	-3.9%	-2.8%
2011-2016	-0.8%	-2.9%	-4.9%	-2.8%
2016-2021	3.2%	-0.7%	-4.3%	-0.5%
2021-2026	4.7%	0.8%	-1.8%	1.3%
2026-2031	0.0%	-3.0%	-5.5%	-2.6%

Population Projections for People aged 40-64 years

There has been rapid growth in this age group in recent years and this population is expected to continue to increase until 2016 in all districts but at a slower rate than in previous years. After 2016 the population in this age group is expected to decline.

Table 19 Projected Population Change in each 5 year Period

	Tasman District	Nelson City	Marlborough District	NMDHB
1996-2001	21.6%	16.5%	18.1%	18.7%
2001-2006	19.9%	14.9%	15.3%	16.7%
2006-2011	5.9%	7.1%	5.1%	6.0%
2011-2016	0.0%	1.2%	0.6%	0.6%
2016-2021	-2.8%	-2.4%	-0.6%	-1.9%
2021-2026	-5.7%	-4.3%	-3.0%	-4.4%
2026-2031	-3.0%	-2.6%	-1.9%	-2.5%

Population Projections for People aged 65+

There has been rapid growth in this age group in recent years and this population is expected to continue to increase in all districts. The most rapid growth is projected to be in the 2006-2016 period.

Table 20 Projected Population Change in each 5 year Period

	Tasman District	Nelson City	Marlborough District	NMDHB
1996-2001	14.6%	5.2%	12.5%	10.5%
2001-2006	12.7%	4.9%	12.7%	10.1%
2006-2011	22.6%	12.5%	19.7%	18.3%
2011-2016	26.3%	19.4%	21.2%	22.3%
2016-2021	18.8%	17.4%	15.5%	17.2%
2021-2026	17.5%	17.8%	14.3%	16.5%
2026-2031	12.7%	12.6%	10.3%	11.8%

4. Socio-demographic Data

In this section data from the 2006 Census are summarised to show the socio-demographic characteristics of the NMDHB population. Population proportions for NMDHB are compared with New Zealand and some comparisons between the local government authority areas within NMDHB are also made. This analysis includes the following variables:

- Place of birth
- Marital status
- Educational Qualifications
- Labour Force Status
- Occupation Type
- Personal Income Level
- Family Type
- Household Composition
- Access to Telecommunication Systems
- Access to Motor Vehicles
- Tenure of Households
- Average Population per Dwelling
- Resident Population Compared with Census Night Population
- Fuel for Heating
- Benefit Recipients
- Households with a High Number of Residents
- Tobacco Smoking
- Hours of Work
- Means of Travel to Work

Some tables with detailed socio-demographic data showing the number of people in each category in the NMDHB area are provided in the Appendix.

4.1.1 Birthplace

Over 80% of NMDHB residents were born in New Zealand (80.9%) compared with 73.5% for New Zealand as a whole. Marlborough District has the highest proportion of people born in New Zealand (82.6%).

Only 15.2% of NMDHB residents were born overseas compared with 21.8% for New Zealand as a whole. Nelson City has the highest proportion of people born overseas (18.0%). The reason that % Born in NZ + % Born overseas do not add up to 100% is a further group "Not Elsewhere Included" which is described as "Inadequately Described and Not Stated."

Table 21 Birthplace of NMDHB Residents, 2006

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% Born in NZ	81.3	78.7	82.6	80.9	73.5
% Born overseas	15.0	18.0	12.7	15.2	21.8

4.1.2 Marital Status

Data on the legal marital status of NMDHB residents shows that:

- A lower proportion of NMDHB residents (26.7%) had never been married or joined a civil union compared with New Zealand as a whole (31.4%).
- A higher proportion of NMDHB residents (17.8%) had been separated, divorced, widowed or bereaved compared with New Zealand as a whole (16.0%).

These data may reflect differences in the age-structure of the two populations.

Table 22 Legal Marital Status of NMDHB Residents (aged 15+), 2006

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% Never Married	25.0	30.4	24.6	26.7	31.4
% Separated, Divorced, Widowed or Bereaved Civil Union Partner	16.6	19.4	17.3	17.8	16.0

Data on the social marital status of NMDHB residents shows a similar pattern to the legal marital status data described above.

Table 23 Social Marital Status of NMDHB Residents (aged 15+), 2006

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% Never married or Civil Union	16.5	20.6	16.2	17.8	21.9
% Separated, divorced, widowed or bereaved civil union partner	16.3	19.1	17.0	17.5	16.2

4.1.3 Educational Qualifications

Nearly one quarter of the NMDHB population (24.5%) have no qualifications. This is higher than for New Zealand as a whole (22.4%). Marlborough District has the highest proportion of the population with no qualifications (26.0%).

One in ten of the NMDHB population (10.3%) have a Bachelor Degree or higher qualification compared with 14.2% for New Zealand as a whole. Nelson City has the highest proportion of the population with a Bachelor Degree or higher qualification (12.6%).

Table 24 Highest Qualification of NMDHB Residents (aged 15+), 2006

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% With no qualifications	24.5	23.1	26.0	24.5	22.4
% With bachelor degree or higher	9.8	12.6	8.3	10.3	14.2

4.1.4 Labour Force Status

NMDHB has a lower proportion of the population who are unemployed (3.1%) compared with New Zealand as a whole (5.1%). This rate was calculated by dividing the number of people who were unemployed by the total population aged 15+ minus the population who were not in the labour force or who had a labour force status that could not be identified. A similar proportion of the NMDHB labour force are employed full time (73.1%) compared with New Zealand as a whole (73.2%). This figure is greatest for Marlborough District (75.6%).

A slightly higher proportion of the NMDHB labour force are employed part time (23.8%) compared with New Zealand as a whole (21.7%). This figure is greatest for Nelson City (24.5%).

Table 25 Labour force Status of NMDHB Residents (aged 15+), 2006

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% Employed full time	72.6	71.2	75.6	73.1	73.2
% Employed part time	24.9	24.5	22.0	23.8	21.7

% Unemployed	2.5	4.2	2.5	3.1	5.1
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4.1.5 Occupation Type

The profile of NMDHB in terms of occupation types is similar to New Zealand as a whole. The main difference is that NMDHB has a higher proportion of Labourers (18.1%) compared with New Zealand as a whole (11%). NMDHB also has a slightly lower proportion of professionals (15.1%) compared with New Zealand as a whole (18.1%).

Table 26 Occupation Type of Employed NMDHB Residents (aged 15+), 2006

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
Managers	19.0	13.8	18.5	17.2	17.1
Professionals	13.4	19.3	12.9	15.1	18.9
Technicians and Trades Workers	11.9	12.5	13.0	12.5	12.2
Community and Personal Service Workers	7.4	8.6	7.9	8.0	7.9
Clerical and Administrative Workers	9.6	11.5	9.7	10.3	12.1
Sales Workers	7.8	9.2	7.6	8.2	9.4
Machinery Operators and Drivers	6.1	5.6	5.6	5.8	5.8
Labourers	19.7	14.8	19.8	18.1	11.0
Not Elsewhere Included	5.1	4.6	5.1	4.9	5.7
Total	100	100	100	100	100

4.1.6 Personal Income Level

A similar proportion of NMDHB residents had a personal income level of less than \$15,000 per year (31.1%) compared with New Zealand as a whole (30.6%).

There was a slightly lower proportion of NMDHB residents with a personal income level of \$100,000 or more (2.2%) compared with New Zealand as a whole (3.3%).

Table 27 Personal Income Level of NMDHB Residents (aged 15+), 2006

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% <\$15,000	33.0	30.9	29.5	31.1	30.6
% \$100,000 or more	2.0	2.3	2.3	2.2	3.3

4.1.7 Family Type

A lower proportion of NMDHB families are one parent families with children (14.7%) compared with New Zealand as a whole (18.1%). Nelson City has a similar proportion of one parent families with children to New Zealand (18.5%).

Table 28 Family Type for Private Occupied Dwellings, NMDHB Residents, 2006

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% One Parent With Child(ren)	13.1	18.5	12.7	14.7	18.1

4.1.8 Household Composition

NMDHB has a slightly higher proportion of one person households (24.1%) compared with New Zealand (22.6%). Nelson City has the highest proportion of one person households (25.7%).

Table 29 Household Composition for Households in Private Occupied Dwellings, NMDHB Residents, 2006

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% Two-Family Household	1.5	1.2	1.4	1.4	2.5
% One-Person Household	22.6	25.7	23.9	24.1	22.6

4.1.9 Access to Telecommunication Systems

A slightly lower proportion of NMDHB residents (71.3%) have access to a cellphone or mobile phone compared with New Zealand as a whole (74.2%). Tasman District has the lowest level of access (69.6%).

The same proportion of NMDHB residents have access to a telephone (91.8%) compared with New Zealand as a whole (91.6%).

A slightly higher proportion of NMDHB residents have access to a fax machine (28.1%) compared with New Zealand as a whole (26.0%) but a low proportion of Nelson City residents have access to a fax machine (23.5%).

A similar proportion of NMDHB residents have access to the internet (59.3%) compared with New Zealand as a whole (60.5%). Internet access levels are similar across all districts.

A similar proportion of NMDHB residents have no access to telecommunication systems (1.9%) compared with New Zealand as a whole (2.0%). This figure is highest for Tasman District (2.2%).

Table 30 Access to Telecommunication Systems for Households in Private Occupied Dwellings, NMDHB Residents, 2006

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% Access to a Cellphone/Mobile Phone	69.6	71.9	72.4	71.3	74.2
% Access to a Telephone	91.4	92.2	91.8	91.8	91.6
% Access to a Fax Machine	31.1	23.5	29.8	28.1	26.0
% Access to the Internet	59.3	60.2	58.2	59.3	60.5
% No Access to Telecommunication Systems	2.2	1.7	1.7	1.9	2.0

4.1.10 Access to Motor Vehicles

A slightly lower proportion of NMDHB residents have no access to a motor vehicle (6.2%) compared with New Zealand as a whole (7.8%). Nelson City has the highest proportion with no access to a motor vehicle (7.7%).

A slightly higher proportion of NMDHB residents have three or more vehicles (16.1%) compared with New Zealand as a whole (15.3%). Tasman District has the highest proportion with three or more vehicles (18.4%).

Table 31 Access to Motor Vehicles for Households in Private Occupied Dwellings, NMDHB Residents, 2006

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% No Motor Vehicle	4.8	7.7	6.0	6.2	7.8
% Three or More Motor Vehicles	18.4	13.2	16.9	16.1	15.3

4.1.11 Tenure of Households

A slightly lower proportion of NMDHB people are living in dwellings they do not own (26.3%) compared with New Zealand as a whole (31.1%). Nelson City has the highest proportion living in homes they do not own (30.0%).

Table 32 Tenure of Household for Households in Private Occupied Dwellings, NMDHB Residents, 2006

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% Dwelling Not Owned by Usual Resident(s)	23.0	30.0	25.8	26.3	31.1

4.1.12 Average Population per Dwelling

There were just over 50,000 occupied dwellings in the NMDHB area at the time of the 2006 Census and with a population of 130,000 this gives an average of 2.5 people per dwelling. This is slightly less than the average for New Zealand as a whole (2.7 people per dwelling).

Table 33 Number of Dwellings and Mean Population per Dwelling, NMDHB, 2006 Census

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
Total Occupied Dwellings	17268	17187	16842	51297	1471746
Usually Resident Population	44625	42891	42549	130065	4027947
Mean Population per Dwelling	2.6	2.5	2.5	2.5	2.7

4.1.13 Resident Population Compared with Census Night Population

The resident population of NMDHB was just over 130,000 at the time of the 2006 Census but the population in the area on Census night was nearly 140,000. This shows that there are a lot of visitors to the area around the time of the Census (March).

Table 34 Usually Resident Population and Census Night Population,

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
Usually Resident Population	44625	42891	42549	130065	4027947
Census Night Population	48309	45372	45972	139653	4143282
Additional Population on Census Night	3684	2481	3423	9588	115335

4.1.14 Fuel for Heating

The Census collects information on the sources of heating people have in their dwellings such as electric heaters, gas and log fires. A small proportion of people reported that they have no source of heating. Just over 1% of NMDHB residents (1.2%) reported that they have no fuel for heating compared with 2.3% for New Zealand as a whole. Nelson City had the highest proportion of people with no fuel for heating (1.4%).

Table 35 Proportion of dwellings with no fuel for heating, NMDHB, 2006 Census

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% of dwellings with no fuel for heating	1.2	1.4	0.9	1.2	2.3

4.1.15 Benefit Recipients

Data from the Census on the proportion of families receiving benefits as a source of family income (Table 36) shows that:

- A lower proportion of NMDHB families (6.9%) are receiving domestic purposes benefit compared with New Zealand as a whole (7.7%).

- A similar proportion of NMDHB families (2.8%) are receiving sickness benefit compared with New Zealand as a whole (3.1%).
- A lower proportion of NMDHB families (2.3%) are receiving unemployment benefit compared with New Zealand as a whole (4.1%).
- A higher proportion of NMDHB families (3.2%) are receiving invalids benefit compared with New Zealand as a whole (2.7%).

Table 36 Proportion of families receiving benefits as sources of family income, NMDHB, 2006 Census

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% Domestic Purposes Benefit	6.5	8.6	5.6	6.9	7.7
% Sickness Benefit	2.9	3.1	2.4	2.8	3.1
% Unemployment benefit	2.9	2.7	1.2	2.3	4.1
% Invalids benefit	2.8	3.8	2.9	3.2	2.7

4.1.16 Households with a High Number of Residents

In the NMDHB areas 2.6% of households have six or more usual residents compared with 4.6% for New Zealand as a whole. Tasman District has the highest number of households with six or more usual residents (2.9%).

Table 37 Proportion of Households with Six or more Usual Residents,

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% with 6 or more usual residents	2.9	2.3	2.5	2.6	4.6

4.1.17 Tobacco Smoking

The 2006 Census showed that a slightly lower proportion of NMDHB residents were regular smokers (17.9%) compared with New Zealand as a whole (18.9%). Marlborough District had the highest proportion of smokers (18.5%).

Table 38 Proportion of regular smokers for population aged 15+, NMDHB, 2006 Census

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% Regular smokers (15+)	16.8	18.2	18.5	17.9	18.9

4.1.18 Hours of Work

A similar proportion of NMDHB residents worked less than 10 hours per week (5.4%) compared with New Zealand as a whole (5.0%). This figure was highest for Nelson City (5.9%).

A slightly higher proportion of NMDHB residents worked 60 hours or more per week (10.4%) compared with New Zealand as a whole (9.5%). This figure was highest for Tasman District (12.0%) and Marlborough District (11.5%).

Table 39 Proportion of population working less than 10 hours and more than 60 hours per week, NMDHB, 2006 Census

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
<10 hours worked per week	5.8	5.9	4.5	5.4	5.0
60 Hours or More Worked	12.0	7.7	11.5	10.4	9.5

4.1.19 Means of Travel to Work

A higher proportion of NMDHB residents biked, walked or jogged to work (11.2%) compared with New Zealand as a whole (7.2%). Nelson City had the highest proportion of the population who biked, walked or jogged to work (13.5%).

Table 40 Proportion of the population who biked, walked or jogged to work

	Tasman District	Nelson City	Marlborough District	NMDHB	NZ
% Biked, Walked or Jogged to Work	9.6	13.5	10.6	11.2	7.2

4.1.20 Socio-economic Deprivation

NZDep2006 is a measure of socio-economic deprivation or disadvantage in New Zealand. Each small area in the country is given a score based on its demographic profile. These scores can then be divided into deciles or quintiles. Each quintile represents 20% of the New Zealand population. Quintile 1 is made up of the 20% of the population in New Zealand who live in the least deprived (richest) areas and quintile 5 is made up of the 20% of the population in New Zealand who live in the most deprived (poorest) areas.

4.1.21 NZDep2006 Population Distribution by Quintile

The tables below provide estimates of the number of people in the NMDHB area living in each NZDep2006 Quintile. These population numbers have been calculated by adding up the meshblock populations for each quintile.

- At the time of the 2006 Census, 9500 people in the NMDHB area lived in Quintile five areas (out of the total 2006 Census population of 130000 people).
- Two thirds of the Quintile 5 population in the NMDHB area live in Nelson City.

Table 41 NMDHB Population Distribution by NZDep2006 Quintile

Quintile	Marlborough District	Nelson City	Tasman District	NMDHB
1	9021	5379	9615	24015
2	10158	10335	12483	32976
3	10938	9660	10524	31122
4	10689	11256	10284	32229
5	1647	6180	1674	9501
No data	111	117	0	228
Total	42564	42927	44580	130071

- A lower proportion of the NMDHB population live in the most deprived quintile compared with New Zealand as a whole (7.3% of the NMDHB population live in Quintile 5 areas compared with about 20% for New Zealand).
- Nelson City has the highest proportion of its population living in Quintile 5 areas (14.4%).
- Tasman (21.6%) and Marlborough (21.2%) have the highest proportion living in Quintile 1 Areas (least deprived).

Table 42 NMDHB Population Distribution by NZDep2006 Quintile (%)

Quintile	Marlborough District	Nelson City	Tasman District	NMDHB
1	21.2	12.5	21.6	18.5
2	23.9	24.1	28.0	25.4
3	25.7	22.5	23.6	23.9
4	25.1	26.2	23.1	24.8
5	3.9	14.4	3.8	7.3
No data	0.3	0.3	0.0	0.2
Total	100	100	100	100

4.1.22 High Deprivation Areas

The Census Area Units with the highest deprivation levels (highest NZDep2006 scores) are shown in the table below. This table shows all the CAUs in the NMDHB area with an average CAU deprivation score of 1000 or more. The full list of NZDep2006 scores for NMDHB CAUs is included in the appendix.

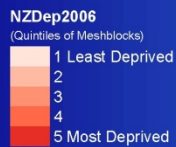
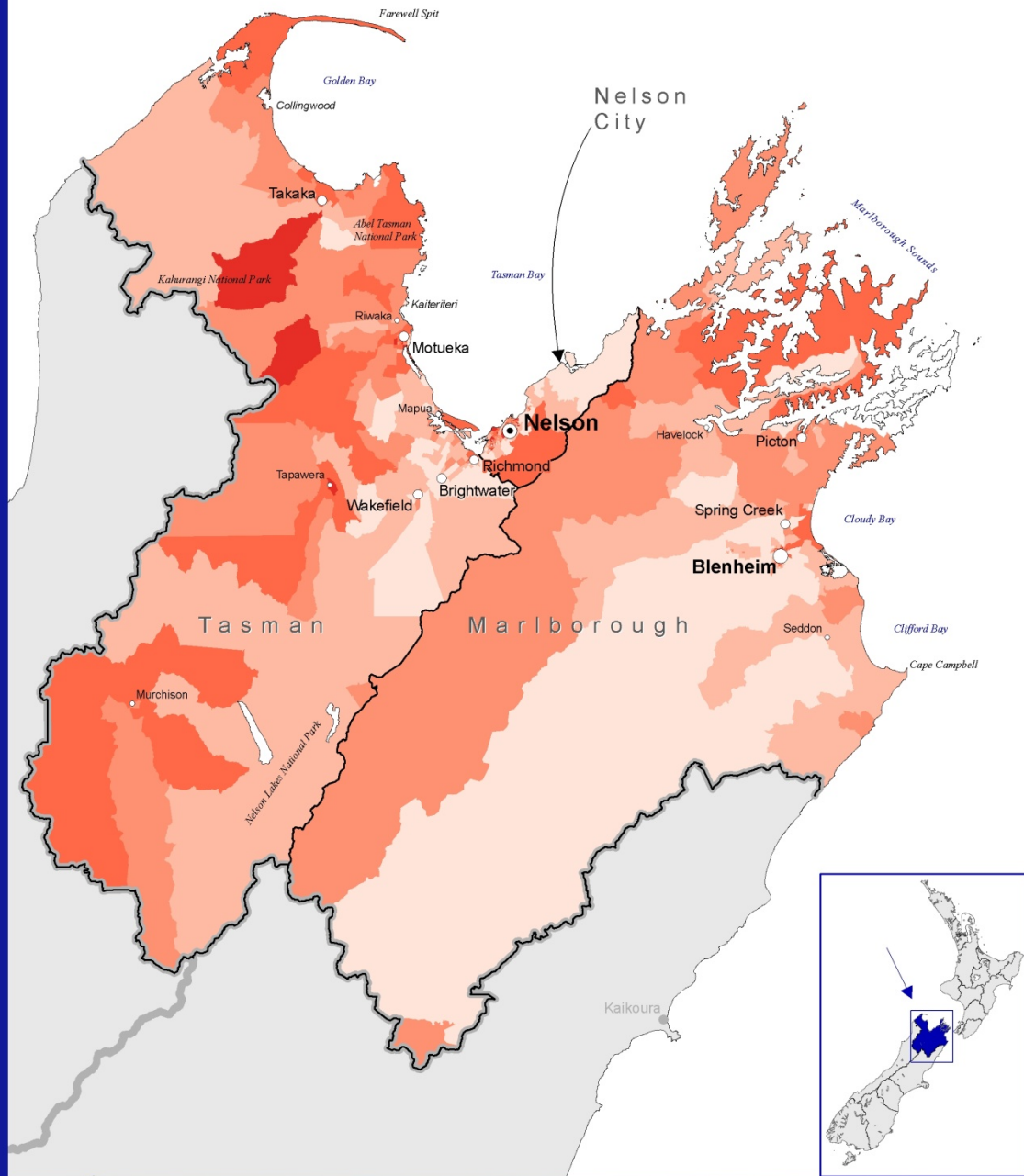
Table 43 NZDep2006: NMDHB Average Score and Decile for Census Area Units (areas with average deprivation score of 1000 or more)

CAU Name	Average NZDep2006 Decile for CAU	Average NZDep2006 Score for CAU	Population
Isel Park	9	1067	2766
Toi Toi	9	1064	1596
Tapawera	9	1060	405
Broads	9	1055	1560
Washington	8	1051	2772
Tahunanui	8	1049	2001
Mayfield	8	1039	2694
Rabbit Island	8	1036	6
The Wood	8	1033	2823
Motueka West	8	1029	3414
Jackett Island	8	1029	3
Blenheim Central	8	1025	2736
Kirks	8	1025	795
Nelson Airport	8	1025	843
Grampians	8	1024	2034
Takaka	7	1012	1149
Seddon	7	1011	510
Motueka East	7	1009	3708
Picton	7	1005	2928
Trafalgar	7	1000	405
Maitai	7	1000	597

A map showing NZDep2006 quintiles for NMDHB is provided on the following page.

Nelson Marlborough DHB NZDep2006

Atlas of Socioeconomic Deprivation in New Zealand NZDep2006



White P, Gunston J, Salmond C, Atkinson J, Crampton P. 2008.
Atlas of Socioeconomic Deprivation in New Zealand NZDep2006
Wellington: Ministry of Health.

Public Health Intelligence
Charting our Health
www.moh.govt.nz/phi
Health & Disability
Systems Strategy Directorate
Ministry of Health
Data Sources:
Ministry of Health
University of Otago
Statistics NZ

June 2008



4.1.23 Socio-economic Indicators

Socio-economic indicators from the 2007 report by Public Health Intelligence “An indication of New Zealanders Health” (Ministry of Health, 2007) are summarised below for NMDHB compared with New Zealand as a whole.

The indicators for which the NMDHB rate was worse than the New Zealand rate are listed below (negative indicators) as are the indicators for which the NMDHB rate was better than the New Zealand rate (positive indicators).

NMDHB has a range of positive socio-economic indicators with the one negative indicator being educational achievement in terms of NCEA level 2 certificate or higher being attained at school.

Table 44 Summary of Socio-economic Indicators for NMDHB Compared with New Zealand

Negative Indicators	Positive Socio-economic Indicators
<ul style="list-style-type: none"> • Low level of NCEA Level 2 certificate (or higher) gained at school 	<ul style="list-style-type: none"> • Low unemployment • Low proportion of low income earners • Low proportion with no access to a telephone/cellphone • Low proportion with no access to a motor vehicle • Low proportion not living in own home • Low level of household crowding

Note: For these indicators the difference between the NMDHB rate and the NZ rate was statistically significant.

5. Health Indicators

The Health Indicators outlined in the last version of the Health Needs Assessment were updated, based on rates calculated by the Health and Disability Intelligence Unit of the Ministry of Health, in late 2008.

The results of this are summarised Table 45 below which shows the conditions for which the NMDHB rate was high or low compared with the New Zealand rate.

Table 45 Summary of Health Indicators 2008

	High	Low
Hospitalisation	Overall cancer Breast cancer Melanoma Musculoskeletal disease Elective surgery	Avoidable hospitalisation Cardiovascular disease Asthma Chronic obstructive pulmonary disease Diabetes Renal failure Stroke Self-harm <i>Burns</i> <i>Unintentional injury</i>
Mortality	Nil	Avoidable mortality Diabetes Stroke
Cancer registrations	Nil	Nil
Disease notifications	Nil	Campylobacteriosis Tuberculosis

Burns and unintentional injury are in italics because the rates were so low for Nelson Marlborough DHB that they suggest that there may be something different from other parts of New Zealand in the way in which injury cases are hospitalised or in the way these hospital admissions are recorded in Nelson Marlborough DHB.

The Health and Disability Intelligence Unit are no longer performing this analysis. Hospitalisations, Mortality and Cancer are dealt with in the relevant sections which follow. The NMDHB disease notifications¹³ rates per 100,000 population are compared with the whole of New Zealand rate in the table below. Pertussis is the only notifiable disease with a statistically significantly higher rate for NMDHB than for the whole of New Zealand.

Table 46 NMDHB and New Zealand Disease notification rates 2009

Disease	all DHBs	NMDHB
Campylobacteriosis	166.3	126.5
Cryptosporidiosis	19.8	17.5
Dengue fever	3.2	0
Gastroenteritis	16.5	7.3
Giardiasis	38	35.1
Haemophilus influenzae type b	0.3	0
Hazardous substances injury	0.3	0
Hepatitis A	1	0
Hepatitis B	1.3	0

Disease	all DHBs	NMDHB
Hepatitis C	0.7	0
Invasive pneumococcal disease	16.3	16.1
Lead absorption	8.5	7.3
Legionellosis	1.8	0
Leptospirosis	1.6	0
Listeriosis	0.6	0
Malaria	1.2	0
Measles	5.9	0
Meningococcal disease	3.1	0
Mumps	1.5	0
Non seasonal influenza A (H1N1)	85	58.5
Paratyphoid fever	0.6	0
Pertussis	32.4	68
Rheumatic fever	3.2	0
Rickettsial disease	0.1	0
Rubella	0	0
Salmonellosis	26.2	29.2
Shigellosis	2.8	0
Tuberculosis disease	7.1	0
Typhoid fever	0.8	0
VTEC/STEC infection	3.3	0
Yersiniosis	10	0

6. Mortality

6.1 Life Expectancy

The following data on life expectancy at birth was calculated by Statistics New Zealand for Territorial Authorities as part of the analytical report on New Zealand Life Tables 2005-2007³.

These data show that:

- Life expectancy improved for all districts between 2000/02 and 2005/7
- Tasman District has the longest life expectancy at birth for both males and females and Nelson City shares the top spot for males.
- Marlborough District has the shortest life expectancy for males
- All 3 Territorial Authority (TA) Areas are very similar in terms of life expectancy at birth and all are slightly longer than New Zealand as a whole for males but only Tasman is longer for females.

Table 47 Life Expectancy at Birth³ by TA, NMDHB, 1995 – 2002

		New Zealand	Tasman District	Nelson City	Marlborough District
1995-1997	Male	74.4	74.8	75.8	74.4
	Female	79.8	80.6	79.4	79.6
2000-2002	Male	76.5	77.2	76.1	76.8
	Female	81.4	82.0	81.4	80.6
2005-2007	Male	75.2	78.9	78.9	78.1
	Female	82.4	82.5	82.3	82.1

6.2 Overall Mortality Rate

The overall mortality rates provided below were calculated by Statistics New Zealand for Territorial Authorities as part of the analytical report on New Zealand Life Tables 2005-2007³. Direct standardisation was used and the age and sex distribution of the estimated resident population of New Zealand at 30 June 1996 was used as the standard population.

These data show that there was a reduction in the overall mortality rate between 2000/02 and 2005/07 in all Territorial Authorities in the NMDHB area. Tasman District has the lowest mortality rate with Nelson City and Marlborough District with a slightly higher rate.

Table 48 Age-standardised Mortality Rate/1,000

	Tasman District	Nelson City	Marlborough District	NZ
1995/97	7.3	7.2	7.5	7.5
2000/02	5.9	6.4	6.6	6.5
2005/07	5.6	5.8	5.8	5.8

6.3 Main Causes of death

Mortality data for the period 2003 to 2007 were analysed in such a way as to enable comparison of causes of death for NMDHB residents with data for New Zealand as a whole¹⁴. This analysis is based on counts for subgroups of ICD 10 codes.

Nelson Marlborough DHB Cause of death age standardised rates, for cumulative years 2003-2007, annualised are compared in Table 49 below with total New Zealand age standardised rates for 2007. The items where NMDHB shows a higher rate than New Zealand overall are highlighted.

Table 49 Age standardised death rates 2003-2007 for selected causes for NMDHB against the total New Zealand age standardised death rates 2007

ICD-10 code	Cause of death	NMDHB Age standardised death rates 2003-2007	Annual NMDHB	New Zealand National rates 2007
C00-C96, D45-D47	Total cancer	660.5	132.1	135.1
C16	Stomach cancer	18.8	3.8	4.9
C18-C21	Colorectal cancer	102.3	20.5	19.4
C33-34	Lung Cancer	111.6	22.3	24.7
C50	Breast cancer	59.4	11.9	11.1
C53	Cervical cancer	5.0	1.0	2.2
C61	Prostate cancer	91.9	18.4	19.0
E10-E14	Diabetes mellitus	48.4	9.7	12.9
F00-F09	Organic, including symptomatic, mental disorders	47.6	9.5	8.7
I05-I09	Chronic rheumatic heart disease	7.8	1.6	3.2
I10-I15	Hypertensive disease	14.2	2.8	4.0
I20-I25	Ischaemic heart disease	411.0	82.2	77.2
I30-I52	Other forms of heart disease	83.2	16.6	14.7
I60-I69	Cerebrovascular disease	169.3	33.9	33.7
J10-J18	Pneumonia and influenza	37.9	7.6	5.2
J40-J47	Chronic lower respiratory diseases	113.5	22.7	23.1
J44	COPD	45.7	9.1	19.8
Q00-Q99	Congenital anomalies	25.2	5.0	4.7
V01-V99	Transport accidents	61.7	12.3	11.3
X60-X84	Intentional self-harm	59.5	11.9	11.0
X85-Y09	Assault	7.0	1.4	1.3
	All causes of death	2121.6	424.3	427.2

Colorectal and breast cancer both have slightly higher rates for NMDHB than for New Zealand as a whole. The NMDHB rate is also very slightly higher, but essentially similar, for Cerebrovascular disease, Congenital anomalies and Assault.

There is a greater difference in the rates (NMDHB being higher) for Organic, including symptomatic, mental disorders. This might be as a result of our history of being an Intellectual Disability Support Services (IDSS) provider. Other areas where NMDHB rates are higher than the national rate are Ischaemic heart disease and other forms of heart disease; it will be interesting to see if the rates reduce when looking at data for the period following the local introduction of percutaneous coronary intervention in November 2007.

It is somewhat surprising that the NMDHB rate for Pneumonia and influenza is so high compared with the national rate; this is not a condition where NMDHB has a high rate for ambulatory sensitive hospitalisations on Ambulatory Sensitive Hospitalisation in page 60. However, with fairly low prevalence and small numbers this difference may look big but in fact may not be statistically significant.

Intentional self-harm is another area where NMDHB has a high rate of death; this will be discussed in more detail in Suicide and Intentional Self Harm on page 64. The Transport accident rate is also high; this may be as a result of our local countryside and our roading.

The NMDHB age standardised death rate¹⁵ is shown below (Figure 1) against the other DHBs for comparison. Confidence intervals have been calculated for the age-standardised rates at the 95 percent level. They are indicated by the error bars. The Maori NMDHB age standardised death rate is also shown below (Figure 2) against that of the other DHBs for comparison. The total population, age-standardised rate for NMDHB is marginally below the New Zealand rate. The Maori population age-standardised rate is significantly below the New Zealand rate.

Figure 1 Death rates by DHB, total population, age-standardised rates, 2006

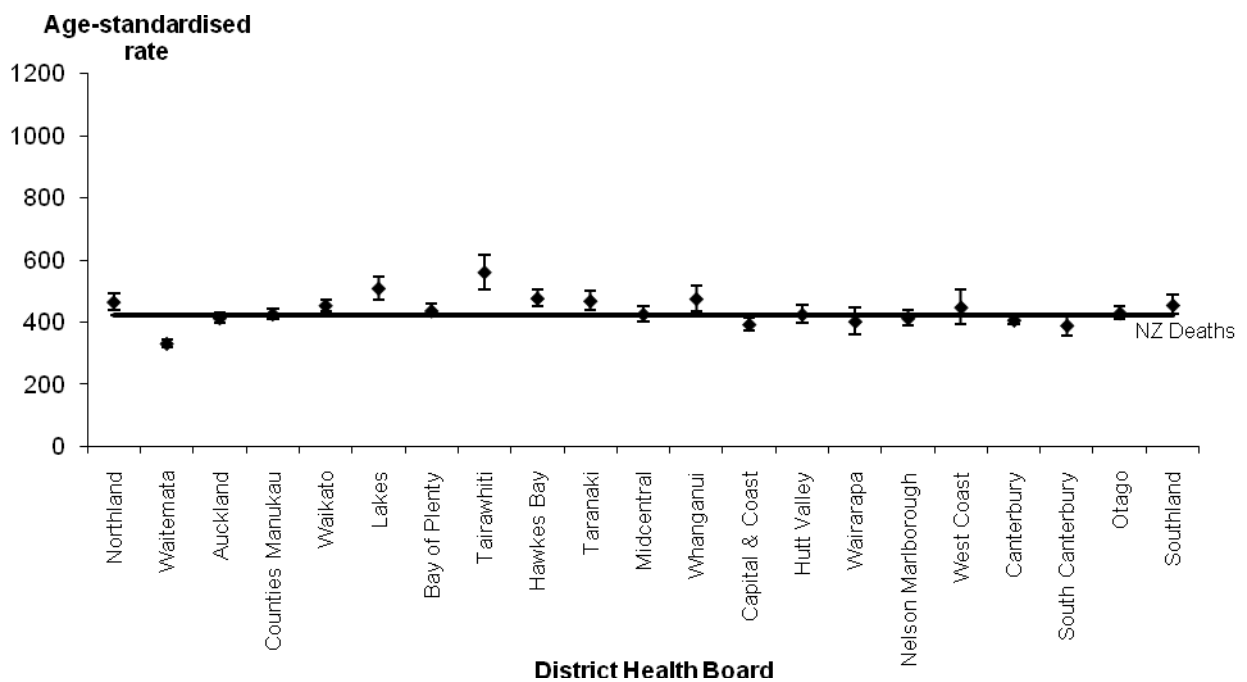
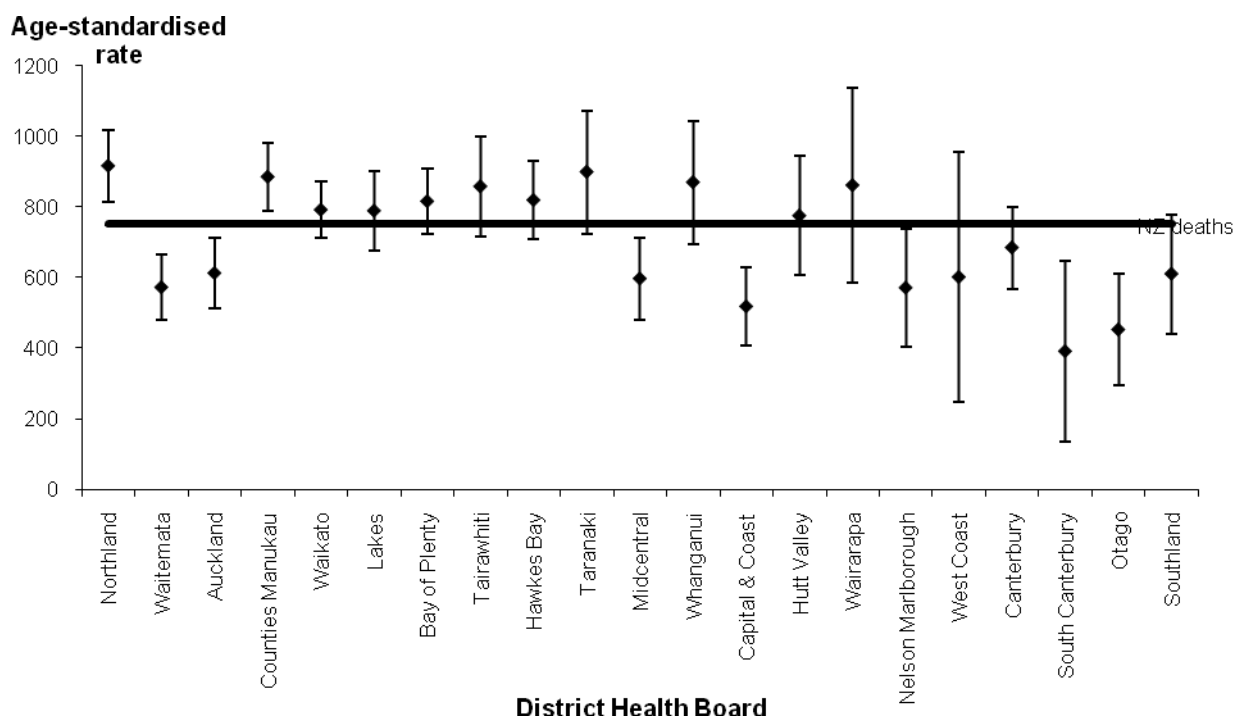


Figure 2 Death rates by DHB, Maori population, age-standardised rates, 2006.



6.4 Main Causes of Death by Age Group

The top 20 causes of death⁴ for all age groups by Subcategory are shown in Table 50 below.

Table 50 Top 20 causes of death for all age groups

Subcategory description	Deaths 2003-2007	%
I20–I25 Ischaemic heart diseases	1125	21.5%
I60–I69 Cerebrovascular diseases	501	9.6%
C15–C26 Malignant neoplasms of digestive organs	459	8.8%
J40–J47 Chronic lower respiratory diseases	298	5.7%
C30–C39 Malignant neoplasms of respiratory and intrathoracic organs	259	4.9%
I30–I52 Other forms of heart disease	238	4.5%
C81–C96 Malignant neoplasms, stated or presumed to be primary, of lymphoid, haematopoietic and related tissue	156	3.0%
F00–F09 Organic, including symptomatic, mental disorders	152	2.9%
E09–E14 Impaired glucose regulation and diabetes mellitus	123	2.3%
C50 Malignant neoplasms of breast	123	2.3%
I70–I79 Diseases of arteries, arterioles and capillaries	122	2.3%
J10–J18 Influenza and pneumonia	121	2.3%
C60–C63 Malignant neoplasms of male genital organs	109	2.1%
C43–C44 Melanoma and other malignant neoplasms of skin	97	1.9%
G30–G32 Other degenerative diseases of the nervous system	97	1.9%
X60–X84 Intentional self-harm	83	1.6%
C64–C68 Malignant neoplasms of urinary tract	82	1.6%
C76–C80 Malignant neoplasms of ill-defined, secondary and unspecified sites	71	1.4%
C51–C58 Malignant neoplasms of female genital organs	65	1.2%
W00–W19 Falls	58	1.1%

The main causes of death for each age group are summarised below. This is based on the deaths of NMDHB residents for the 5 year period from 2003 to 2007.

6.4.1 0-14 years

For children aged 0-14 years immaturity (pre-term and low-birth weight babies) is the leading cause of death, followed by congenital malformations, accidental suffocation and road traffic accidents. The causes of death each causing more than 3% of the 57 deaths in this age group are shown in Table 51.

Table 51 Causes of death (2003-2007) for children aged 0-14 years

ICD 10 Code	Description	Deaths 2003-2007	%
P07	Disorders related to short gestation and low birth weight, not elsewhere classified	4	7%
W75	Accidental suffocation and strangulation in bed	3	5%
V03	Pedestrian injured in collision with car, pick-up truck or van	3	5%
Q87	Other specified congenital malformation syndromes affecting multiple systems	3	5%
G80	Cerebral palsy	2	3%
X00	Exposure to uncontrolled fire in building or structure	2	3%
P91	Other disturbances of cerebral status of newborn	2	3%
Q91	Edwards' syndrome and Patau's syndrome	2	3%

6.4.2 15-24 years

For young people aged 15-24 years motor vehicle crashes and suicide account for more than 50% of all deaths. The causes of death each causing more than 4% of the 50 deaths in this age group are shown in Table 52.

Table 52 Causes of death (2003-2007) for young people aged 15-24 years

ICD 10 Code	Description	Deaths 2003-2007	%
X70	Intentional self-harm by hanging, strangulation and suffocation	8	16%
V43	Car occupant injured in collision with car, pick-up truck or van	7	14%
V48	Car occupant injured in noncollision transport accident	6	12%
X67	Intentional self-poisoning by and exposure to other gases and vapours	4	8%
V03	Pedestrian injured in collision with car, pick-up truck or van	2	4%
X47	Accidental poisoning by and exposure to other gases and vapours	2	4%

6.4.3 25-44 years

Suicide and cancers account for more than 40% of death in people aged 25-44 years. The causes of death each causing more than 1.7% of the 174 deaths in this age group are shown in Table 53.

Table 53 Causes of death (2003-2007) for young people aged 25-44 years

ICD 10 Code	Description	Deaths 2003-2007	%
X70	Intentional self-harm by hanging, strangulation and suffocation	15	9%
X67	Intentional self-poisoning by and exposure to other gases and vapours	10	6%
C50	Malignant neoplasm of breast	9	5%
C34	Malignant neoplasm of bronchus and lung	9	5%
I25	Chronic ischaemic heart disease	7	4%
C18	Malignant neoplasm of colon	5	3%
C71	Malignant neoplasm of brain	4	2%
V43	Car occupant injured in collision with car, pick-up truck or van	4	2%
C43	Malignant melanoma of skin	4	2%
X42	Accidental poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified	4	2%
I21	Acute myocardial infarction	4	2%

6.4.4 45-64 years

The main causes of death for people aged 45-64 years are cancers and Ischaemic heart disease with 50% of the total 710 deaths in this age group caused by cancer and 14% by Ischaemic heart disease. The causes of death each causing more than 1.5% of the 710 deaths in this age group are shown in Table 54.

Table 54 Causes of death (2003-2007) for young people aged 45-64 years

ICD 10 Code	Description	Deaths 2003-2007	%
C50	Malignant neoplasm of breast	60	8%
I21	Acute myocardial infarction	59	8%
C34	Malignant neoplasm of bronchus and lung	58	8%
I25	Chronic ischaemic heart disease	43	6%
C18	Malignant neoplasm of colon	28	4%
C43	Malignant melanoma of skin	20	3%
J44	Other chronic obstructive pulmonary disease	18	3%
C25	Malignant neoplasm of pancreas	18	3%
I71	Aortic aneurysm and dissection	12	2%
C71	Malignant neoplasm of brain	12	2%
C64	Malignant neoplasm of kidney, except renal pelvis	11	2%
C56	Malignant neoplasm of ovary	11	2%
C61	Malignant neoplasm of prostate	11	2%
C15	Malignant neoplasm of oesophagus	11	2%

6.4.5 65-74 years

The main causes of death for people aged 65-74 years are cancers, ischaemic heart disease and Chronic lower respiratory diseases with 42% of the 877 deaths in this age group caused by cancers, 14% by ischaemic heart disease and 7% by Chronic lower respiratory diseases.

The causes of death each causing more than 1.6% of the 877 deaths in this age group are shown in Table 55.

Table 55 Causes of death (2003-2007) for young people aged 65-74 years

ICD 10 Code	Description	Deaths 2003-2007	%
I21	Acute myocardial infarction	119	14%
C34	Malignant neoplasm of bronchus and lung	88	10%
I25	Chronic ischaemic heart disease	59	7%
J44	Other chronic obstructive pulmonary disease	59	7%
C18	Malignant neoplasm of colon	51	6%
E11	Type 2 diabetes mellitus	27	3%
C50	Malignant neoplasm of breast	21	2%
I71	Aortic aneurysm and dissection	18	2%
C25	Malignant neoplasm of pancreas	17	2%
C80	Malignant neoplasm without specification of site	17	2%
I64	Stroke, not specified as haemorrhage or infarction	16	2%
C61	Malignant neoplasm of prostate	15	2%
C20	Malignant neoplasm of rectum	14	2%

6.4.6 75-84 years

The main causes of death for people aged 75-84 years are cancers, ischaemic heart disease, Cerebrovascular disease and Chronic lower respiratory diseases with 30% of the 1707 deaths in this age group caused by cancers, 24% by ischaemic heart disease, 11% by Cerebrovascular disease and 8% by Chronic lower respiratory diseases.

The causes of death each causing more than 1.5% of the 1707 deaths in this age group are shown in Table 56.

Table 56 Causes of death (2003-2007) for young people aged 75-84 years

ICD 10 Code	Description	Deaths 2003-2007	%
I21	Acute myocardial infarction	219	12.8%
I25	Chronic ischaemic heart disease	185	11%
J44	Other chronic obstructive pulmonary disease	122	7%
I64	Stroke, not specified as haemorrhage or infarction	80	5%
C34	Malignant neoplasm of bronchus and lung	67	4%
C18	Malignant neoplasm of colon	51	3%
C61	Malignant neoplasm of prostate	47	3%
I71	Aortic aneurysm and dissection	44	3%
G30	Alzheimer's disease	43	3%
F03	Unspecified dementia	41	2%
I63	Cerebral infarction	35	2%
E11	Type 2 diabetes mellitus	33	2%
I35	Nonrheumatic aortic valve disorders	28	2%
J18	Pneumonia, organism unspecified	27	2%

6.4.7 85 years or more

The main causes of death for people aged 85 years or more are ischaemic heart disease, cancer and stroke with ischaemic heart disease causing 25% of the 1663 deaths and, cancer and stroke each causing 30%.

The causes of death each causing more than 1.5% of the 1663 deaths in this age group are shown in Table 57.

Table 57 Causes of death (2003-2007) for young people aged 85 years or more

ICD 10 Code	Description	Deaths 2003-2007	%
I21	Acute myocardial infarction	220	13.2%
I25	Chronic ischaemic heart disease	198	12%
I64	Stroke, not specified as haemorrhage or infarction	143	9%
J18	Pneumonia, organism unspecified	84	5%
F03	Unspecified dementia	76	5%
J44	Other chronic obstructive pulmonary disease	67	4%
I50	Heart failure	55	3%
G30	Alzheimer's disease	42	3%
E11	Type 2 diabetes mellitus	37	2%
C61	Malignant neoplasm of prostate	33	2%
I63	Cerebral infarction	33	2%
I35	Nonrheumatic aortic valve disorders	32	2%
I69	Sequelae of cerebrovascular disease	30	2%
C18	Malignant neoplasm of colon	27	2%
C34	Malignant neoplasm of bronchus and lung	26	2%
I48	Atrial fibrillation and flutter	25	2%
I67	Other cerebrovascular diseases	25	2%

6.5 Premature Mortality

For this analysis premature mortality is defined as deaths occurring before the age of 65 years.

- Analysis of the mortality data for 2003-2005 shows that nearly 19% of deaths of the NMDHB population occur before the age of 65 years.
- A very much higher proportion of Maori (around 60%) die before the age of 65 compared with non-Maori (around 17%).

Table 58 Premature Mortality by ethnicity 2003-2007

		Data				Total Deaths 2003-2007	Total %
		<65		65+			
Reg_year	Maori or Non-Maori	Deaths 2003-2007	%	Deaths 2003-2007	%		
2003	Maori	26	65%	14	35%	40	100%
	Non-Maori	161	17%	780	83%		
2003 Total		187	19%	794	81%	981	100%
2004	Maori	20	61%	13	39%	33	100%
	Non-Maori	168	16%	876	84%		
						1044	100%

		<65 Data						Total Deaths 2003-2007	Total %
		<65		65+					
Reg_year	Maori or Non-Maori	Deaths 2003-2007	%	Deaths 2003-2007	%				
2004 Total		188	17%	889	83%	1077		100%	
2005	Maori	16	55%	13	45%	29		100%	
	Non-Maori	172	17%	839	83%	1011		100%	
2005 Total		188	18%	852	82%	1040		100%	
2006	Maori	21	54%	18	46%	39		100%	
	Non-Maori	176	17%	850	83%	1026		100%	
2006 Total		197	18%	868	82%	1065		100%	
2007	Maori	30	67%	15	33%	45		100%	
	Non-Maori	201	20%	829	80%	1030		100%	
2007 Total		231	21%	844	79%	1075		100%	
2003-2007	Maori	113	61%	73	39%	186		100%	
	Non-Maori	878	17%	4174	83%	5052		100%	
2003-2007		991	19%	4247	81%	5238		100%	

7. Amenable Mortality

Amenable mortality has been redefined by Martin Tobias, Li Chia Yeh and Roimata Timutimu and summarised in their recent report *Saving Lives: Amenable mortality in New Zealand, 1996 – 2006*¹⁶. The modifications are to optimise its suitability for use in health system performance assessment as a whole-of-system health outcome measure. Amenable mortality is defined as deaths from those conditions for which variation in mortality rates (over time or across populations) reflects variation in the coverage and quality of health care (itself defined as preventive or therapeutic services delivered to individuals or families).

Amenable mortality measures mortality that could potentially have been avoided given timely access to quality healthcare. It is based on a list of condition–intervention pairs applied to deaths under age 75 years (termed ‘premature’ deaths for this purpose). To be included in the list, the specified intervention must be shown (by randomised controlled trials or observational studies) to be capable of reducing mortality from the condition by over 30% within 5 years of effective coverage. A short lag time is necessary because amenable mortality is intended to be an indicator of current, not future, health system performance. At the same time, the intervention should have been introduced within the past 40 years, and the condition should still account for over 0.1% of all under-75 deaths. The reason for these latter criteria is, again, that amenable mortality is meant to indicate current health system performance – not (in this case) past performance.

The final list of amenable conditions comprises 35 conditions, grouped into six super-categories:

- Infections
- Maternal and infant conditions
- Injuries
- Cancers
- Cardiovascular diseases and diabetes,
- Other chronic diseases.

The ICD9 and ICD10 code set generated was applied to deaths from 1996 to 2006 in both New Zealand and Australia. For analysis at the District Health Board (DHB) level, a hierarchical Bayesian modelling approach was used, both to shrink uncertainty intervals and to improve confounding control. This analysis used the linked census–mortality data set for 2001–04 only

7.1 Amenable Mortality Nationally 2006

In 2006 approximately 28,000 deaths were registered in New Zealand, of which approximately 10,600 were of people aged under 75 years. Almost half of these (4900, or 47%) were classified as amenable, using the updated code list. Amenable mortality rates were found to increase steadily with age, so that the majority of these deaths occur in old age (65–74 years age group). Yet the *proportion* of deaths attributable to amenable causes peaks in adolescence (males) or young adulthood (females) at 60–70%. Adjusting for age, males are at excess risk of both amenable and non-amenable mortality. The male excess is twice as great for the former than the latter mortality category (sex ratio of 1.75 versus 1.37 respectively).

7.2 Trends in amenable mortality 1996–2006

Under-75 mortality fell steadily over the past decade, more steeply for males than for females. Both amenable and non-amenable mortality contributed to this decline, with amenable mortality declining faster than non-amenable mortality in both sexes. Among males, amenable and non-amenable mortality declined at average annual rates of 3.0% and 1.6%, respectively, while for females the corresponding rates were 2.5% and 0.9%.

7.3 Social inequalities in amenable mortality

Amenable mortality varies across both ethnic and socioeconomic groups. In 2006, Maori amenable mortality rates were approximately three times, and non-amenable mortality rates twice, the corresponding non-Maori rates in both sexes, after adjusting for age. Absolute inequality in amenable mortality, as measured by the standardised rate difference (SRD), was stable over the decade from 1996 to 2006 in both sexes, while relative inequality, as measured by the standardised rate ratio (SRR), increased (from 2.1 to 2.8 in males and from 2.7 to 3.0 in females).

In 2006 Pacific people's amenable mortality rate, adjusted for age, was approximately twice the non-Pacific rate, while the non-amenable mortality rate was approximately 1.5 times higher. Inequality in amenable mortality remained stable over the decade, whether measured on absolute or relative scales.

In 2006 people living in the 20% of small areas with the highest level of deprivation (NZDep2006 quintile 5) had amenable mortality rates 1.9 (males) and 1.7 (females) times higher than their counterparts living in the 20% of small areas with the lowest level of deprivation (NZDep2006 quintile 1), after adjusting for both age and ethnic mix. The corresponding ratios for non-amenable mortality were 1.5 and 1.4 respectively. Again, there were no statistically significant trends in amenable mortality inequality in either sex over the decade from 1996 to 2006, whether measured on an absolute or a relative scale.

7.4 Causal structure of amenable mortality

In 2006 the major contributors to amenable mortality were non-cancer chronic diseases, mainly cardiovascular diseases and diabetes (55% of the total burden in males, 45% in females), cancers (17% males, 35% females) and injuries (22% males, 14% females). However, these contributions varied by ethnic group, with Maori, Pacific and Asian ethnic groups all showing a higher proportionate contribution from cardiovascular disease and diabetes, and a lower share from cancer and injury, than the European majority (after adjusting for age). The low relative impact of injury was particularly noticeable among Pacific people.

Over the decade from 1996 to 2006 the relative contribution of injury increased (whole population, age-adjusted), while infections and maternal and infant causes declined. Perhaps surprisingly, the impact of cancer did not increase steadily. Reflecting the relative increase in injury and cancer, the share held by cardiovascular diseases, diabetes and other non-cancer chronic diseases has fallen slightly in both sexes.

7.5 Regional variation in amenable mortality

Using a hierarchical Bayesian modelling approach applied to the 2001–04 linked census–mortality data set, substantial variation was found in DHB amenable (and non-amenable) mortality rates (Figure 3). The variation was much reduced after adjusting for age, sex,

ethnicity and deprivation (or income) (Figure 4, but some variation remained. Because this could reflect unremoved confounding by extra-health-system factors, the adjusted amenable mortality rates were further standardised for variation in non-amenable mortality (Figure 5). The 'fully adjusted' amenable mortality rates (Figure 6) showed – reassuringly – only modest residual variation. Within the relatively narrow band of inter-DHB variation observed after full adjustment, Waitemata and Nelson–Marlborough DHBs had rates in the lower tertile, while several (mainly provincial) DHBs had rates in the upper tertile. Despite attempts at confounding control, however, these inequalities cannot be attributed solely to differences in DHB performance during the observation period.

Figure 3 Amenable mortality (2001–2004), by DHB, adjusted for age and sex

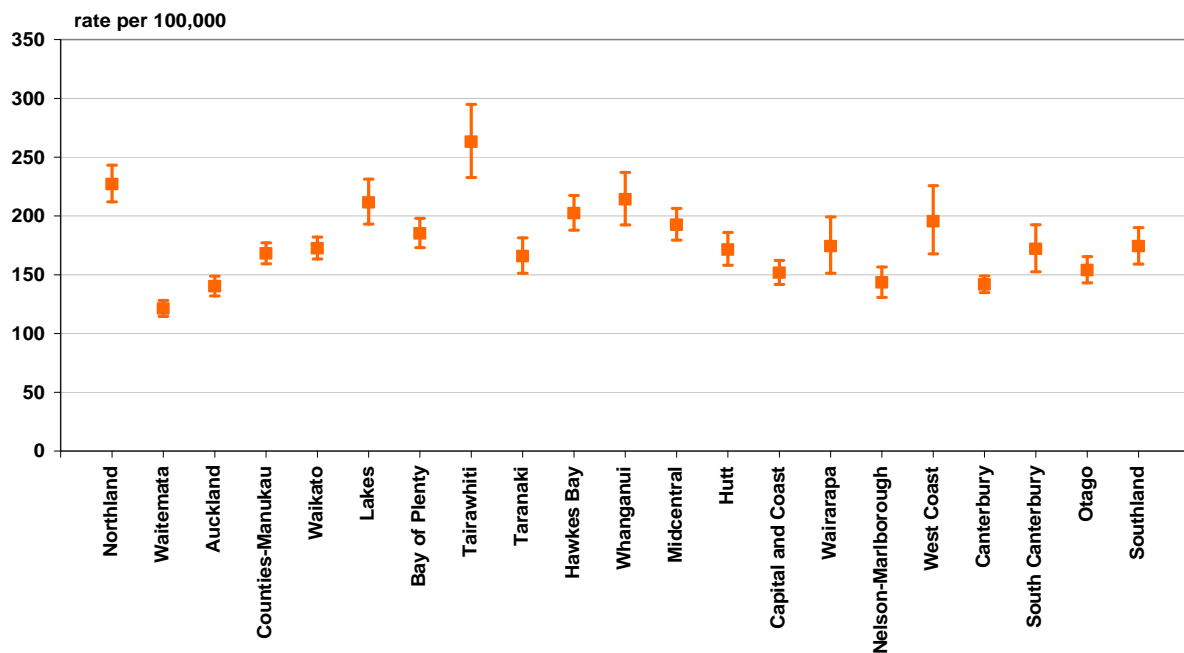


Figure 4 Amenable mortality (2001–2004), by DHB, adjusted for age, sex, ethnicity and deprivation

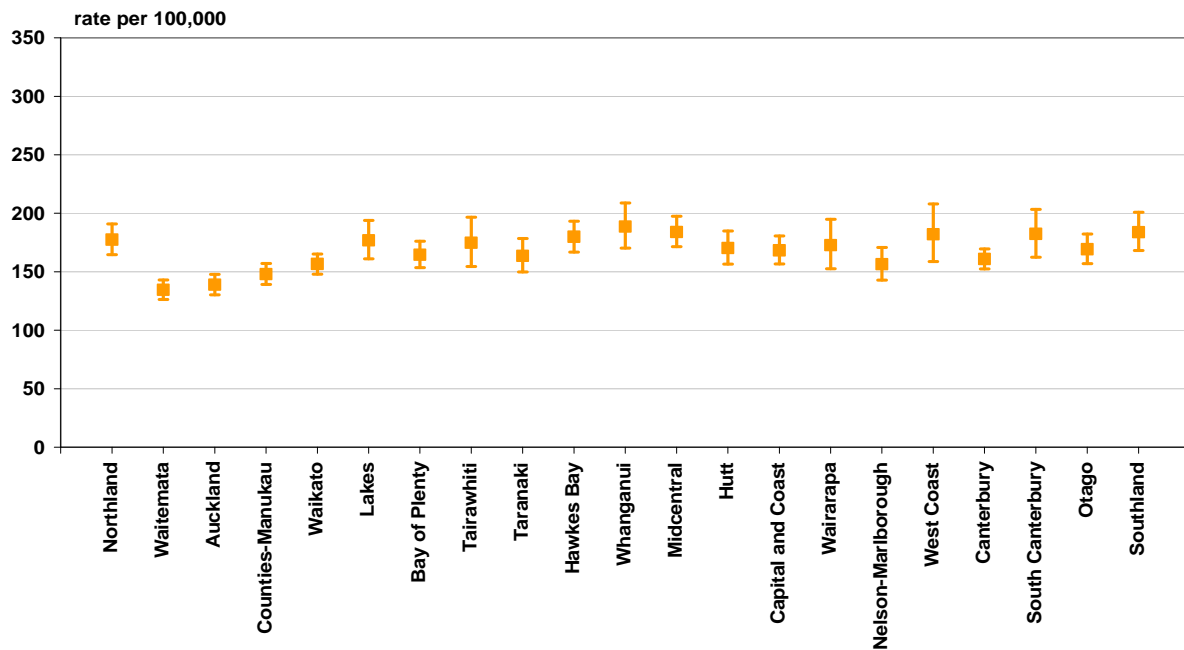


Figure 5 Non-amenable mortality (2001–2004), by DHB, adjusted for age and sex

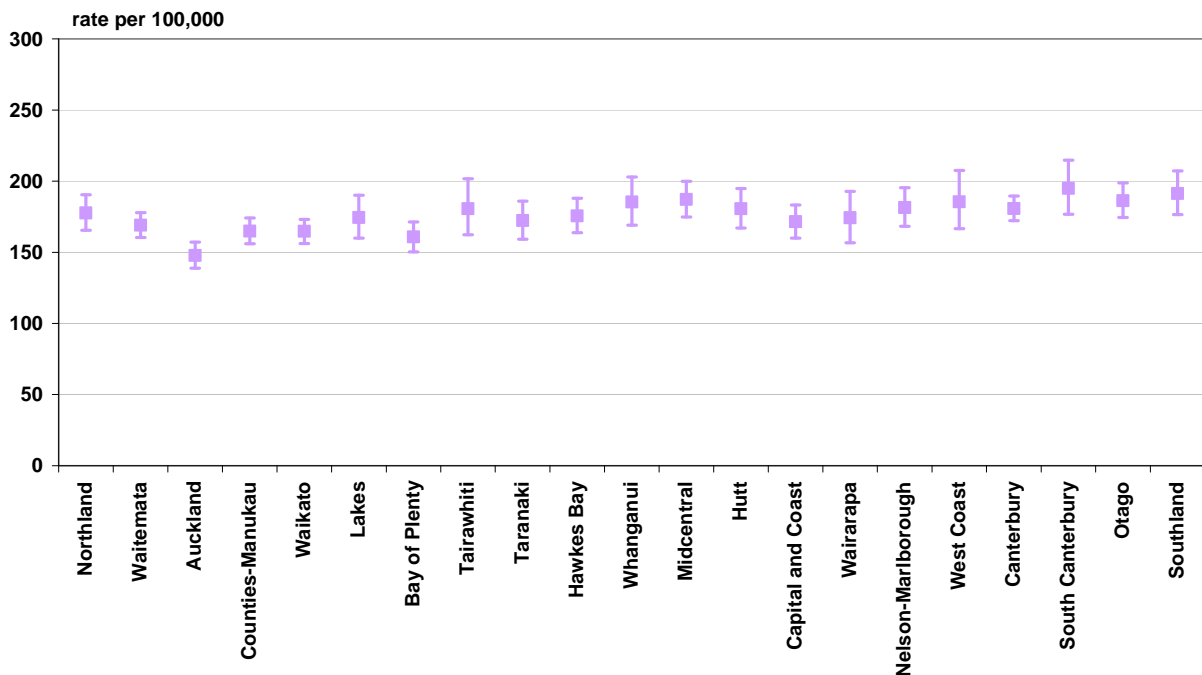
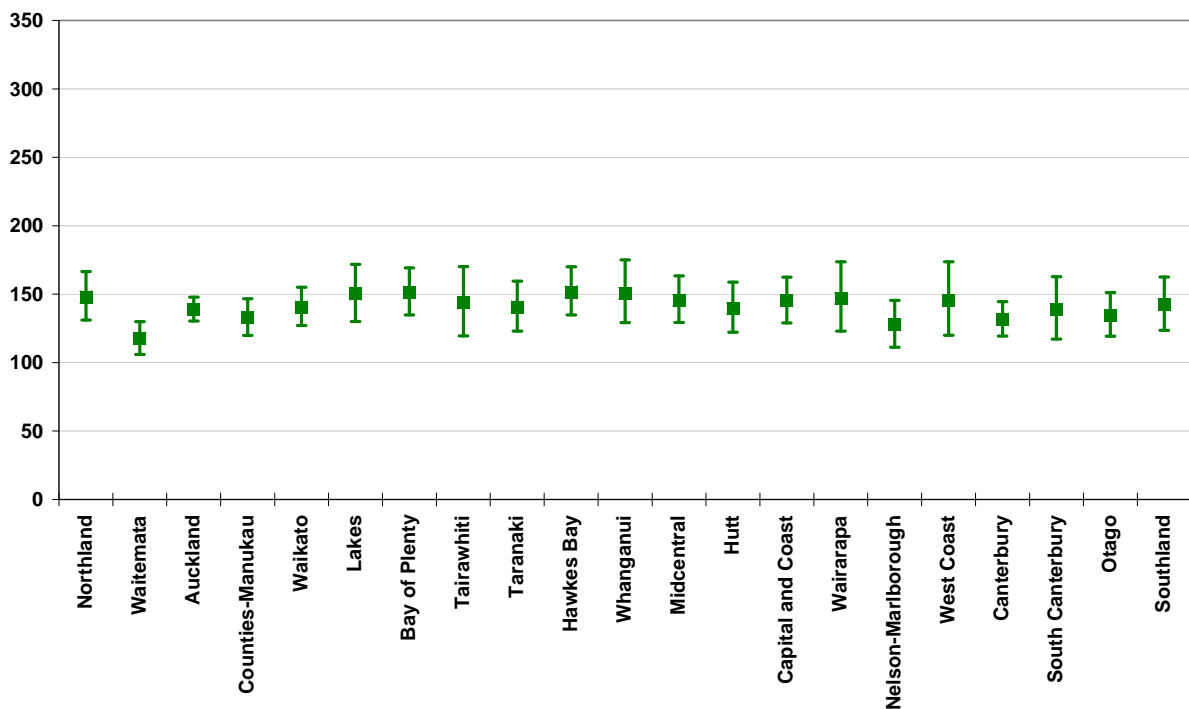


Figure 6 ‘Fully adjusted’ amenable mortality (2001–2004), by DHB (adjusted for age, sex, ethnicity, deprivation, and non-amenable mortality)



7.6 Conclusion on Amenable Mortality

The key take-home message is that amenable mortality, can serve as a useful whole-of-system health outcome indicator – provided the limitations inherent in its design and use are fully understood. These limitations include

- the definition of prematurity (less than 75 years) is arbitrary and ageist

- the classification of each cause of death as being potentially amenable to health care or not is inexact
- time series analysis is problematic, both because of diagnostic and coding changes over time and because of clinical innovations
- the timeliness of the data is problematic – in New Zealand there is currently a delay in excess of two years between registration of death and statistical reporting of mortality by cause of death
- amenable mortality rates are influenced by a host of factors beyond health care, and control of such confounding in statistical models may be incomplete
- the exclusion of non-fatal health outcomes (morbidity, disability) means that this indicator can provide only a partial view of population health status or outcomes at best.

It is reassuring to see that NMDHB had rates in the lower tertile (third) of DHBs in terms of rates of amenable mortality.

The current level of amenable mortality achieved by a DHB can be thought of as indicating the potential that still exists for population health gain through realistic improvements in the DHB's health system. However, the new definition of amenable mortality as developed for, and used in, this analysis implies that amenable mortality cannot realistically be eliminated. By definition over 30% of these deaths should not have occurred, given access to currently available health technologies, suggesting that a one-third reduction from the current level of amenable mortality represents a feasible target.

8. Cancer Registrations

This section explores how NMDHB compares with New Zealand as a whole in terms of age standardised rates for cancer registration of selected common cancer types. Table 59 below shows the Numbers and Age standardised rates for Cancer Registrations for NMDHB⁵ and Total New Zealand⁶ Population in 2007. NMDHB has a slightly higher rate of registration for all causes and colorectal cancer and a more markedly higher rate for malignant melanoma and malignant neoplasm of the prostate.

Table 49 back on page 31 showed how NMDHB compares with New Zealand as a whole in terms of age standardised death rates. Part of this table is repeated below (Table 60) with one additional cancer included, malignant melanoma^{4,14}.

The fact that the NMDHB death rate is not higher for Malignant neoplasm of the prostate in spite of the high registration rate may be because NMDHB healthcare is efficient at registering and treating this cancer. The higher registration rate for Malignant melanoma of the skin is more of a concern. The NMDHB age standardised death rate (2003-2007) is higher than the national rate for 2007. This might be partly because of NMDHB's low Maori population percentage (Maori have rates of malignant melanoma so low that it is not possible to calculate an age standardised death rate) but it may be the price we pay for being the sunshine capital of New Zealand.

Table 59 Numbers and Age standardised rates for Cancer Registrations for NMDHB and Total New Zealand Population 2007

Year	Cancer	NMDHB		NZ		Group
		Cases	rate	Cases	rate	
2007	Malignant neoplasm of breast (ICD-10-AM code C50):	77	88.5	2,565	90.3	Female
2007	Colorectal cancer (ICD-10-AM codes C18-C21):	115	48.5	2,809	45.6	Total
2007	Malignant neoplasm of the trachea, bronchus and lung (ICD-10-AM codes C33-C34)	65	26.5	1,822	29.9	Total
2007	Malignant melanoma of the skin (ICD-10-AM code C43):	99	48.5	2,173	39.1	Total
2007	Malignant neoplasm of the prostate (ICD-10-AM code C61):	140	165.5	2,954	106.5	Male
2007	All causes	767	354.1	19,736	340.5	Total

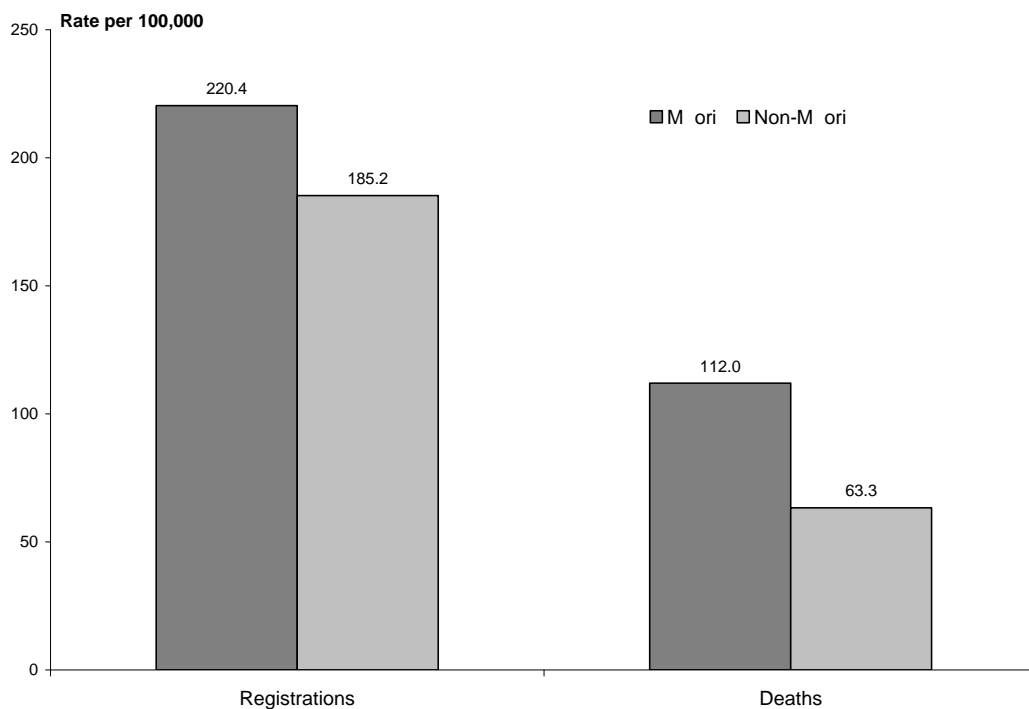
Table 60 Death Age standardised death rates for the selected cancers highlighted in Table 59 above

ICD-10 code	Cause of death	NMDHB Age standardised death rates 2003-2007	Annual NMDHB	New Zealand National rates 2007
C00-C96, D45-D47	Total cancer	660.5	132.1	135.1
C16	Stomach cancer	18.8	3.8	4.9
C18-C21	Colorectal cancer	102.3	20.5	19.4
C33-34	Lung Cancer	111.6	22.3	24.7
C50	Breast cancer	59.4	11.9	11.1
C53	Cervical cancer	5.0	1.0	2.2
C61	Prostate cancer	91.9	18.4	19.0
C43	Malignant Melanoma	29.5	5.9	4.8

9. Unequal Impact – Maori and Non-Maori cancer statistics

There are significant disparities in the incidence rate for all cancers combined between Maori and non-Maori. These are being investigated at a national level⁸. For Maori, the age-sex-standardised incidence rate for all cancers combined for the period 2002-2006 was 220.4 per 100,000, 19% higher than the non-Maori rate of 185.2 per 100,000. The cancer death rate for this period was 112.0 per 100,000 for Maori, 78% higher than the rate for non-Maori of 63.3 per 100,000 (Figure 7).

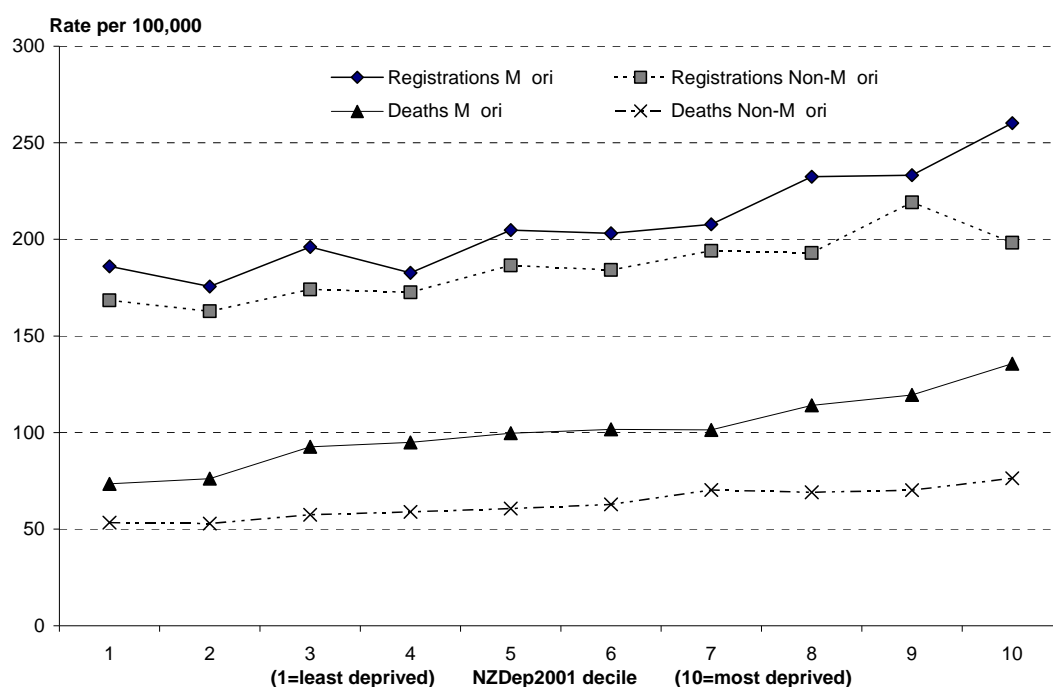
Figure 7 Maori and non-Maori cancer registrations and deaths, age-sex-standardised rates, 2002–2006



Cancer incidence and mortality for all cancers combined was significantly associated with increasing deprivation among both Maori and non-Maori. The association was stronger for mortality than for incidence. The deprivation gradient was steeper for Maori than for non-Maori in cancer mortality.

Within each deprivation decile, Maori cancer incidence was somewhat higher than that of non-Maori, but the mortality gap was considerably wider than the incidence gap. The differences between Maori and non-Maori were greater in the most deprived decile. (Figure 8)

Figure 8 Cancer registration and death age-standardised rates by deprivation decile, 2002–2006



The five most commonly occurring cancers among Maori were

- lung,
- female breast,
- prostate,
- colorectal,
- stomach cancers.

Among non-Maori, the most common cancers were

- colorectal,
- prostate,
- female breast,
- melanoma of the skin,
- lung cancers.

Cancer incidence was higher for Maori than for non-Maori for many cancers and lower for several others. National registration rates are shown in Table 61. Maori age-sex-standardised incidence was higher for cancers of the lung, breast, stomach, cervix, testis, liver, uterus, larynx, oesophagus, pancreas, thyroid, and for multiple myeloma. Non-Maori incidence was higher than that of Maori for melanoma of the skin, prostate, colon, rectum, and brain cancers. Bladder cancer was also more common among non-Maori males than among Maori males

Table 61 Cancer registrations: numbers, age-sex-standardised rates, Maori:non-Maori rate ratios, 2002–2006

Cancer Registrations	Number		Rate (95% CI)				Rate ratio(95% CI)	
	Maori	Non-Maori	Maori		Non-Maori			
All sites	7,304	84,350	220.4	(215.0–226.0)	185.2	(183.4–186.9)	1.19	(1.16–1.22)
Bladder	88	2,345	2.7	(2.1–3.3)	3.8	(3.7–4.1)	0.69	(0.55–0.87)
Bone	34	166	1.1	(0.8–1.5)	0.9	(0.7–1.1)	1.19	(0.79–1.80)
Brain	91	1,223	2.9	(2.3–3.6)	4.0	(3.7–4.4)	0.71	(0.57–0.90)
Breast: female*	1,237	10,875	71.0	(67.0–75.3)	55.4	(54.0–56.7)	1.28	(1.20–1.37)
Cervix*	144	685	8.4	(7.1–10.0)	5.0	(4.5–5.5)	1.70	(1.40–2.08)

Cancer Registrations	Number		Rate (95% CI)				Rate ratio(95% CI)	
	Maori	Non-Maori	Maori		Non-Maori			
Colorectal	543	13,066	16.4	(15.0–17.9)	23.2	(22.7–23.7)	0.71	(0.64–0.77)
<i>Colon</i>	337	8,633	10.1	(9.0–11.3)	14.5	(14.1–14.9)	0.70	(0.62–0.78)
<i>Rectum</i>	207	4,432	6.3	(5.4–7.2)	8.7	(8.4–9.0)	0.72	(0.62–0.84)
Gallbladder	35	453	1.0	(0.7–1.4)	0.7	(0.6–0.8)	1.34	(0.92–1.94)
Hodgkin's disease	46	377	1.5	(1.1–2.0)	1.7	(1.5–2.0)	0.86	(0.62–1.18)
Ill-defined sites	225	2,245	6.7	(5.9–7.8)	3.5	(3.3–3.7)	1.92	(1.65–2.23)
Kidney	157	1,713	4.8	(4.1–5.7)	4.0	(3.8–4.3)	1.20	(1.01–1.44)
Larynx	52	340	1.6	(1.2–2.2)	0.7	(0.6–0.8)	2.38	(1.73–3.27)
Leukaemias	264	3,003	8.2	(7.3–9.4)	7.7	(7.3–8.2)	1.06	(0.92–1.22)
<i>Lymphoid leukaemia</i>	151	1,805	4.7	(4.0–5.6)	4.9	(4.5–5.3)	0.97	(0.81–1.17)
<i>Myeloid leukaemia</i>	85	882	2.7	(2.1–3.3)	2.3	(2.0–2.5)	1.17	(0.92–1.50)
<i>Other leukaemias</i>	27	317	0.9	(0.6–1.3)	0.6	(0.5–0.8)	1.41	(0.89–2.23)
Liver	195	791	6.0	(5.2–7.0)	1.6	(1.5–1.8)	3.64	(3.03–4.38)
Lung	1,417	7,286	42.2	(39.9–44.6)	12.9	(12.5–13.4)	3.27	(3.06–3.48)
Melanoma of skin	117	9,493	3.6	(3.0–4.3)	25.5	(24.9–26.1)	0.14	(0.12–0.17)
Mesothelial and soft tissue	100	1,044	3.0	(2.5–3.7)	2.8	(2.5–3.0)	1.09	(0.87–1.37)
Multiple myeloma	103	1,345	3.0	(2.5–3.7)	2.4	(2.2–2.5)	1.27	(1.02–1.58)
Non-Hodgkin's lymphoma	215	3,069	6.6	(5.8–7.7)	7.1	(6.8–7.5)	0.93	(0.80–1.09)
Oesophagus	103	1,127	3.2	(2.6–3.9)	1.9	(1.7–2.0)	1.68	(1.35–2.10)
Oral cancers	132	1,387	4.1	(3.4–4.9)	3.5	(3.3–3.8)	1.17	(0.97–1.42)
Ovary*	123	1,301	7.0	(5.8–8.4)	5.9	(5.5–6.4)	1.18	(0.97–1.44)
Pancreas	174	1,673	5.1	(4.3–5.9)	2.7	(2.5–2.9)	1.88	(1.58–2.23)
Prostate*	659	12,480	42.8	(39.4–46.5)	47.7	(46.7–48.6)	0.90	(0.82–0.98)
Stomach	319	1,564	9.7	(8.7–10.9)	2.9	(2.6–3.1)	3.41	(2.96–3.93)
Testis*	150	600	10.6	(9.0–12.5)	6.3	(5.6–7.0)	1.68	(1.38–2.05)
Thyroid	148	775	4.5	(3.8–5.3)	2.8	(2.5–3.1)	1.61	(1.33–1.95)
Uterus*	222	1,512	12.5	(10.9–14.4)	6.6	(6.1–7.0)	1.91	(1.63–2.23)

Ratios in bold are statistically significant at the 5% level. Rates reported for cancers marked with an asterisk (*) are sex-specific.

The most common causes of cancer death among Maori were

- lung,
- female breast,
- colorectal,
- stomach
- prostate cancers

For non-Maori, the leading causes of cancer death were

- lung,
- colorectal,
- female breast
- prostate cancers.

Cancers of unknown primary site were the 4th leading cause of cancer death for Maori and 5th leading cause for non-Maori

Maori mortality rates were higher for cancer of the prostate, kidney, non-Hodgkin's lymphoma, ovarian, oral cancers, and mesothelial and soft tissue cancers as well as the cancers for which they have a higher incidence namely lung, breast, stomach, cervix, testis, liver, uterus, larynx, oesophagus, pancreas, thyroid, multiple myeloma and oral and kidney cancers for Maori males and gallbladder cancer for Maori females. Non-Maori death rates were higher for colon cancer, melanoma of the skin, and brain cancer (males only).

Cancer deaths: numbers, age-sex-standardised Ratios in bold are statistically significant at the 5% level. Rates reported for cancers marked with an asterisk (*) are sex-specific

Table 62 Cancer deaths: numbers, age-sex-standardised rates, Maori:non-Maori rate ratios, 2002–2006

Cancer	Number		Rate (95% C)		Rate ratio(95% CI)
	Maori	Non-Maori	Maori	Non-Maori	
All sites	3,720	35,894	112.0 (108.4–115.7)	63.0 (62.2–63.8)	1.78 (1.72–1.84)
Bladder	42	880	1.3 (0.9–1.7)	1.2 (1.1–1.3)	1.08 (0.79–1.48)
Bone	18	73	0.6 (0.4–1.0)	0.3 (0.3–0.5)	1.75 (1.02–3.02)
Brain	81	1,034	2.5 (2.0–3.1)	3.0 (2.7–3.2)	0.85 (0.68–1.07)
Breast: female*	362	2,814	20.6 (18.6–22.8)	11.9 (11.4–12.4)	1.73 (1.55–1.94)
Cervix*	58	242	3.3 (2.6–4.3)	1.1 (1.0–1.3)	2.92 (2.16–3.94)
Colorectal	269	5,567	8.1 (7.2–9.2)	8.9 (8.7–9.2)	0.91 (0.80–1.03)
<i>Colon</i>	160	3,762	4.8 (4.1–5.6)	5.8 (5.5–6.0)	0.83 (0.71–0.98)
<i>Rectum</i>	109	1,805	3.3 (2.8–4.0)	3.2 (3.0–3.3)	1.05 (0.86–1.28)
Gallbladder	25	343	0.7 (0.5–1.0)	0.5 (0.5–0.6)	1.27 (0.84–1.92)
Hodgkin's disease	5	80	0.2 (0.1–0.4)	0.2 (0.2–0.3)	0.68 (0.27–1.72)
Ill-defined sites	206	1,989	6.2 (5.4–7.1)	3.0 (2.8–3.1)	2.10 (1.81–2.43)
Kidney	74	729	2.3 (1.8–2.8)	1.4 (1.2–1.5)	1.66 (1.30–2.12)
Larynx	11	129	0.3 (0.2–0.6)	0.2 (0.2–0.2)	1.72 (0.93–3.21)
Leukaemias	89	1,312	2.8 (2.2–3.4)	2.6 (2.4–2.8)	1.05 (0.84–1.31)
<i>Lymphoid leukaemia</i>	35	434	1.1 (0.8–1.6)	1.0 (0.9–1.1)	1.13 (0.79–1.63)
<i>Myeloid leukaemia</i>	40	732	1.2 (0.9–1.7)	1.4 (1.3–1.5)	0.87 (0.63–1.21)
<i>Other leukaemias</i>	14	146	0.4 (0.2–0.7)	0.2 (0.2–0.3)	1.78 (1.00–3.19)
Liver	147	677	4.5 (3.8–5.3)	1.3 (1.2–1.4)	3.40 (2.83–4.09)
Lung	1,158	6,242	34.6 (32.7–36.7)	10.9 (10.6–11.3)	3.17 (2.97–3.38)
Melanoma of skin	27	1,298	0.9 (0.6–1.3)	2.7 (2.6–2.9)	0.31 (0.21–0.46)
Mesothelial and soft tissue	54	611	1.7 (1.3–2.2)	1.2 (1.1–1.4)	1.34 (1.01–1.79)
Multiple myeloma	54	750	1.5 (1.2–2.0)	1.2 (1.1–1.3)	1.34 (1.01–1.78)
Non-Hodgkin's lymphoma	110	1,369	3.4 (2.8–4.1)	2.4 (2.3–2.6)	1.38 (1.13–1.69)
Oesophagus	76	923	2.3 (1.8–2.9)	1.5 (1.4–1.6)	1.54 (1.22–1.96)
Oral cancers	56	543	1.7 (1.3–2.3)	1.1 (1.0–1.2)	1.60 (1.21–2.12)
Ovary*	74	852	4.2 (3.3–5.3)	3.0 (2.8–3.3)	1.39 (1.09–1.77)
Pancreas	145	1,524	4.3 (3.6–5.0)	2.4 (2.3–2.6)	1.74 (1.46–2.07)
Prostate*	166	2,685	11.1 (9.5–12.9)	7.0 (6.7–7.3)	1.59 (1.35–1.86)
Stomach	221	1,225	6.8 (5.9–7.7)	2.1 (2.0–2.3)	3.20 (2.76–3.71)
Testis*	15	27	1.1 (0.6–1.8)	0.2 (0.2–0.4)	4.27 (2.22–8.21)
Thyroid	20	104	0.6 (0.4–0.9)	0.2 (0.1–0.2)	3.26 (1.98–5.38)
Uterus*	53	376	3.0 (2.3–3.9)	1.2 (1.1–1.4)	2.43 (1.81–3.27)

Ratios in **bold** are statistically significant at the 5% level.

Rates reported for cancers marked with an asterisk (*) are sex-specific.

10. Hospitalisation Data

This analysis of hospitalisation data is based on the number of discharges of NMDHB residents⁹ from publicly funded hospitals in New Zealand. It includes all hospital discharges and the data have not been filtered to exclude certain categories. It is important to note that people can be discharged multiple times from hospital in a year and the data given below are not counts of the number of unique individual people who have been in hospital but rather they are counts of the total number of hospital discharges.

Analysis of hospitalisation data showed that there were 29,496 discharges of NMDHB residents from publicly funded hospitals in 2009. This includes NMDHB residents discharged from hospitals outside the NMDHB area. 2,190 of these hospital discharges were Maori (7.4%).

Although about one third of hospital discharges are for people resident in each of the three local government areas (Table 63), Tasman District has a slightly lower share (30%). Marlborough District has the highest share of hospital discharges for Maori (41%).

Table 63 **Number of Hospital Discharges by District and Ethnicity, NMDHB Residents, 2009**

Maori/other	Data	Marlborough District	Nelson City	Tasman District	Grand Total
Maori	Discharges % of ethnicity events	897 41%	812 37%	481 22%	2,190 100%
Other	Discharges % of ethnicity events	9,427 35%	9,512 35%	8,367 31%	27,306 100%
Total Discharges		10,324	10,324	8,848	29,496
Total % of ethnicity events		35%	35%	30%	100%

Over half of all people discharged from hospital are female (53.5%) (Table 64). This reflects the higher number of women in older age groups and the admission of women to hospital for childbirth. For Maori, the proportion of hospital discharges that are female is even higher (61%).

Table 64 **Number of Hospital Discharges by Gender and Ethnicity, NMDHB Residents, 2009**

	Maori/other Data				Total Discharges	Total % of ethnicity discharges
	Maori	Other				
SEX	Discharges	% of ethnicity discharges	Discharges	% of ethnicity discharges		
F	1,341	61.23%	14,449	52.92%	15,790	53.53%
M	849	38.77%	12,857	47.08%	13,706	46.47%
Grand Total	2,190	100.00%	27,306	100.00%	29,496	100.00%

The difference in the age-structure of the Maori and non-Maori populations is reflected in the fact that nearly one third of hospital discharges for Maori are aged 0-14 years (30.9%) compared with only 13.4% in this age-group for non-Maori (Table 65).

In contrast, over one third of hospital discharges for non-Maori are aged 65 years or more (37.6%) compared with only 9.5% in this age-group for Maori.

Table 65 Number of Hospital Discharges by Age and Ethnicity, NMDHB Residents, 2009

Age group	Maori		Other		Total Discharges	Total % of ethnicity discharges
	Discharges	% of ethnicity discharges	Discharges	% of ethnicity discharges		
0-14	677	30.9%	3,665	13.4%	4,342	14.7%
15-24	409	18.7%	2,151	7.9%	2,560	8.7%
25-44	506	23.1%	4,963	18.2%	5,469	18.5%
45-64	391	17.9%	6,271	23.0%	6,662	22.6%
65-74	139	6.3%	3,836	14.0%	3,975	13.5%
75-84	61	2.8%	4,228	15.5%	4,289	14.5%
85+	7	0.3%	2,192	8.0%	2,199	7.5%
Grand Total	2,190	100.0%	27,306	100.0%	29,496	100.0%

10.1 Main Causes of Hospitalisation

Analysis of hospital discharges for NMDHB residents¹⁷ for the year 2009 (Table 66) shows that the leading causes of hospitalisation were:

- Injury, poisoning and certain other consequences of external causes (10.0%)
- Factors influencing health status and contact with health services (9.8%)
- Neoplasms (9.5%)
- Diseases of the circulatory system (9.1%)
- Diseases of the digestive system (9.0%)
- Pregnancy, childbirth and the puerperium (8.8%)
- Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (7.7%)

Table 66 Number of Hospital Discharges by Principal Diagnosis, NMDHB Residents, 2009

ICD10 Block	Discharges	%
Injury, poisoning and certain other consequences of external causes	2,949	10.0%
Factors influencing health status and contact with health services	2,905	9.8%
Neoplasms	2,811	9.5%
Diseases of the circulatory system	2,674	9.1%
Diseases of the digestive system	2,667	9.0%
Pregnancy, childbirth and the puerperium	2,597	8.8%
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	2,271	7.7%
Diseases of the musculoskeletal system and connective tissue	1,938	6.6%
Diseases of the respiratory system	1,783	6.0%
Diseases of the genitourinary system	1,738	5.9%
Diseases of the eye and adnexa	1,007	3.4%

ICD10 Block	Discharges	%
Mental and behavioural disorders	724	2.5%
Diseases of the nervous system	644	2.2%
Diseases of the skin and subcutaneous tissue	602	2.0%
Endocrine, nutritional and metabolic diseases	516	1.7%
Certain infectious and parasitic diseases	416	1.4%
Certain conditions originating in the perinatal period	371	1.3%
Diseases of the blood and blood-forming organs and certain disorders involving the immune system	354	1.2%
Diseases of the ear and mastoid process	294	1.0%
Congenital malformations, deformations and chromosomal abnormalities	235	0.8%
Grand Total	29,496	100.0%

The most common block, "Injury, poisoning and certain other consequences of external causes" is mostly injuries such as fractures but the top 2 are Wound infection following a procedure (4.3% of the ICD10 block) and Haemorrhage and haematoma complicating a procedure, not elsewhere classified (2.8% of the ICD10 block)

"Factors influencing health status and contact with health services" include a range of reasons for hospitalisation such as childbirth (Singleton 41.4% and twins 0.5% of the ICD10 block), Care involving use of rehabilitation procedure (20.4% of the ICD10 block)

9.5% of discharges had a principal diagnosis coming under the umbrella of neoplasm. 3.3% of these discharges ended with the death of the patient.

10.2 Main Causes of Hospitalisation by Age group

The main causes of hospitalisation in 2009 are summarised below for each age group. More detailed tables showing the number of discharges and percentages of the total for each age group are provided in the appendix.

This analysis is based on the number of discharges of NMDHB residents from publicly funded hospitals in New Zealand. It is important to note that people can be discharged multiple times and the numbers given below are not counts of the number of unique individual people who have been in hospital.

There are two analyses for each age group shown here:

1. Volumes based on counts of discharges for each ICD 10 code and therefore the conditions are specific. Codes contributing more than 1% of discharges for each age group are listed
2. A more general approach of counts of discharges for each ICD 10 Subgroup which gives larger numbers per group while maintaining slightly more clinical detail than ICD10 Blocks or Chapters. Codes contributing more than 2% of discharges for each age group are listed

To give an indication of the extent to which multiple discharges¹⁸ occur for any given individual within a year, the % of discharges that are repeats within same subgroup in 2009 are shown in Table 67.

Table 67 % of discharges that are a repeat within same subgroup and year 2009

age group	% of discharges that are a repeat within same subgroup in 2009
0-14	19.6%
15-24	26.3%
25-44	25.1%
45-64	36.5%
65-74	43.2%
75-84	47.8%
85+	48.5%

10.2.1 0-14 Years

By ICD10 code

The leading cause of hospitalisation for this age group is singleton births which accounts for 27.7% of all hospital discharges in this age group. Other leading specific causes of hospitalisation for children aged 0-14 years:

- Dental caries, unspecified (3.2%)
- Asthma, unspecified (2.2%)
- Acute upper respiratory infection, unspecified (2.1%)
- Other preterm infant, 32 or more completed weeks but less than 37 completed weeks (1.9%)
- Acute bronchiolitis, unspecified (1.6%)
- Viral infection, unspecified (1.5%)
- Nonsuppurative otitis media, unspecified (1.5%)
- Periapical abscess without sinus (1.3%)

By Subgroup

- Z30–Z39 Persons encountering health services in circumstances related to reproduction (28.2%)
- K00–K14 Diseases of oral cavity, salivary glands and jaws (6.4%)
- H65–H75 Diseases of middle ear and mastoid (4.3%)
- J00–J06 Acute upper respiratory infections (3.8%)
- P05–P08 Disorders related to length of gestation and fetal growth (3.5%)
- J20–J22 Other acute lower respiratory infections(2.7%)
- J40–J47 Chronic lower respiratory diseases (2.4%)
- J30–J39 Other diseases of upper respiratory tract (2.3%)

10.2.2 15-24 Years

By ICD10 Code

The leading specific cause of hospitalisation for this age group is medical abortions which account for nearly 9.9% of hospital discharges in this age group. Other leading specific causes of hospitalisation for young people aged 15-24 years which with the percentages that they contribute to the admissions for this age group include:

- Single spontaneous delivery (3.4%)
- First degree perineal laceration during delivery (1.8%)
- Other and unspecified abdominal pain (1.5%)
- Acute appendicitis, unspecified (1.5%)
- Pain localised to other parts of lower abdomen (1.3%)
- Chronic tonsillitis (1.2%)
- Second degree perineal laceration during delivery (1.1%)

- Aplastic anaemia, unspecified (1.1%)
- Other specified diseases and conditions complicating pregnancy, childbirth and the puerperium (1.1%)

By Subgroup

- O00–O08 Pregnancy with abortive outcome (12.5%)
- O60–O75 Complications of labour and delivery (8.0%)
- S00–S09 Injuries to the head (4.5%)
- R10–R19 Symptoms and signs involving the digestive system and abdomen (4.5%)
- O30–O48 Maternal care related to the fetus and amniotic cavity and possible delivery problems(4.2%)
- O80–O82 Delivery (3.4%)
- N80–N98 Noninflammatory disorders of female genital tract (3.0%)
- J30–J39 Other diseases of upper respiratory tract (3.0%)
- K00–K14 Diseases of oral cavity, salivary glands and jaws (2.5%)
- T36–T50 Poisoning by drugs, medicaments and biological substances (2.5%)
- L00–L08 Infections of the skin and subcutaneous tissue (2.3%)
- S60–S69 Injuries to the wrist and hand (2.1%)
- K35–K38 Diseases of appendix (2.1%)
- T80–T88 Complications of surgical and medical care, not elsewhere classified (2.0%)

10.2.3 25-44 Years

By ICD10 codes

The leading specific cause of hospitalisation for this age group is medical abortions which account for nearly 3.9% of hospital discharges in this age group. Other leading specific causes of hospitalisation for people aged 25-44 years include:

- Single spontaneous delivery (3.8%)
- Maternal care due to uterine scar from previous surgery (2.2%)
- Second degree perineal laceration during delivery (2.1%)
- First degree perineal laceration during delivery (1.8%)
- Sterilisation (1.5%)
- Prolonged pregnancy (1.3%)
- Missed abortion (1.2%)
- Other and unspecified abdominal pain (1.1%)
- Excessive and frequent menstruation with regular cycle (1.0%)
- Chest pain, unspecified (1.0%)
- Premature rupture of membranes, onset of labour within 24 hours (1.0%)

By Subgroup

- O60–O75 Complications of labour and delivery (9.9%)
- O30–O48 Maternal care related to the fetus and amniotic cavity and possible delivery problems (8.0%)
- O00–O08 Pregnancy with abortive outcome (7.0%)
- N80–N98 Noninflammatory disorders of female genital tract (5.5%)
- O80–O82 Delivery (3.8%)
- R10–R19 Symptoms and signs involving the digestive system and abdomen (3.1%)
- Z30–Z39 Persons encountering health services in circumstances related to reproduction (2.1%)
- S80–S89 Injuries to the knee and lower leg (2.0%)
- M20–M25 Other joint disorders (2.0%)

10.2.4 45-64 Years

By ICDD10 code

The leading specific cause of hospitalisation for this age group is chest pain unspecified which accounts for 3.8% of hospital discharges. Other leading specific causes of hospitalisation for people aged 45-64 years include:

- Atrial fibrillation and flutter (1.8%)
- Unstable angina (1.3%)
- Acute subendocardial myocardial infarction (1.3%)
- Angina pectoris, unspecified (1.2%)
- Malignant neoplasm of skin of other and unspecified parts of face (1.0%)
- Calculus of gallbladder with other cholecystitis, without mention of obstruction (1.0%)
- Unilateral or unspecified inguinal hernia, without obstruction or gangrene, not specified as recurrent (1.0%)
- Other primary coxarthrosis (1.0%)

By Subgroup

- I20–I25 Ischaemic heart diseases (5.5%)
- R00–R09 Symptoms and signs involving the circulatory and respiratory systems (5.2%)
- Z40–Z54 Persons encountering health services for specific procedures and health care (4.0%)
- I30–I52 Other forms of heart disease (3.5%)
- N80–N98 Noninflammatory disorders of female genital tract (3.2%)
- R10–R19 Symptoms and signs involving the digestive system and abdomen (2.7%)
- M20–M25 Other joint disorders (2.7%)
- K80–K87 Disorders of gallbladder, biliary tract and pancreas (2.6%)
- C43–C44 Melanoma and other malignant neoplasms of skin (2.6%)
- M15–M19 Arthrosis (2.5%)
- T80–T88 Complications of surgical and medical care, not elsewhere classified (2.4%)
- K40–K46 Hernia (2.3%)
- D10–D36 Benign neoplasms (2.1%)
- K55–K63 Other diseases of intestines (2.1%)

10.2.5 65-74 Years

By ICDD10 code

The leading specific cause of hospitalisation for this age group is chest pain which accounts for 2.5% of hospital discharges. Other leading specific causes of hospitalisation for people aged 65-74 years include:

- Atrial fibrillation and flutter (2.2%)
- Cataract, unspecified (2.1%)
- Malignant neoplasm of skin of other and unspecified parts of face (1.9%)
- Care involving use of rehabilitation procedure, unspecified (1.7%)
- Acute subendocardial myocardial infarction (1.7%)
- Other primary coxarthrosis (1.7%)
- Other primary gonarthrosis (1.6%)
- Angina pectoris, unspecified (1.5%)
- Unstable angina (1.4%)
- Chronic obstructive pulmonary disease with acute lower respiratory infection (1.3%)
- Malignant neoplasm of prostate (1.3%)
- Fitting and adjustment of urinary device (1.2%)
- Atherosclerotic heart disease, of native coronary artery (1.0%)

By Subgroup

- I20–I25 Ischaemic heart diseases (6.8%)
- Z40–Z54 Persons encountering health services for specific procedures and health care (5.8%)
- I30–I52 Other forms of heart disease (4.9%)
- C43–C44 Melanoma and other malignant neoplasms of skin (4.3%)
- M15–M19 Arthrosis (4.2%)
- R00–R09 Symptoms and signs involving the circulatory and respiratory systems (4.0%)
- T80–T88 Complications of surgical and medical care, not elsewhere classified (2.7%)
- E09–E14 Impaired glucose regulation and diabetes mellitus (2.5%)
- J40–J47 Chronic lower respiratory diseases (2.5%)
- K55–K63 Other diseases of intestines (2.4%)
- H25–H28 Disorders of lens (2.3%)
- K80–K87 Disorders of gallbladder, biliary tract and pancreas (2.2%)

10.2.6 75-84 Years

By ICD10 code

The leading specific cause of hospitalisation for this age group is rehabilitation which accounts for over 5.4% of hospital discharges. Other leading specific causes of hospitalisation for people aged 75-84 years include:

- Degeneration of macula and posterior pole (3.6%)
- Cataract, unspecified (3.5%)
- Atrial fibrillation and flutter (2.4%)
- Chest pain, unspecified (1.8%)
- Pneumonia, unspecified (1.8%)
- Acute subendocardial myocardial infarction (1.8%)
- Malignant neoplasm of skin of other and unspecified parts of face (1.6%)
- Other primary coxarthrosis (1.4%)
- Unstable angina (1.3%)
- Congestive heart failure (1.2%)
- Angina pectoris, unspecified (1.2%)
- Urinary tract infection, site not specified (1.0%)
- Chronic obstructive pulmonary disease with acute lower respiratory infection (1.0%)

By subgroup

- Z40–Z54 Persons encountering health services for specific procedures and health care (8.2%)
- I30–I52 Other forms of heart disease (5.9%)
- I20–I25 Ischaemic heart diseases (5.8%)
- H30–H36 Disorders of choroid and retina (4.8%)
- C43–C44 Melanoma and other malignant neoplasms of skin (4.3%)
- H25–H28 Disorders of lens (3.9%)
- R00–R09 Symptoms and signs involving the circulatory and respiratory systems (3.6%)
- M15–M19 Arthrosis (2.6%)
- K55–K63 Other diseases of intestines (2.6%)
- I60–I69 Cerebrovascular diseases (2.3%)
- J40–J47 Chronic lower respiratory diseases (2.2%)
- J10–J18 Influenza and pneumonia (2.0%)

10.2.7 85 years or More

By ICD10 code

The leading specific cause of hospitalisation for this age group is rehabilitation which accounts for nearly 10.9% of hospital discharges. Other leading specific causes of hospitalisation for people aged 85 years or more include:

- Degeneration of macula and posterior pole (5.1%)
- Congestive heart failure (2.7%)
- Pneumonia, unspecified (2.7%)
- Cataract, unspecified (2.6%)
- Urinary tract infection, site not specified (2.2%)
- Stroke, not specified as haemorrhage or infarction (1.8%)
- Atrial fibrillation and flutter (1.7%)
- Syncope and collapse (1.6%)
- Fracture of subcapital section of femur (1.2%)
- Acute subendocardial myocardial infarction (1.2%)
- Fracture of intertrochanteric section of femur (1.2%)
- Noninfective gastroenteritis and colitis, unspecified (1.1%)
- Malignant neoplasm of skin of other and unspecified parts of face (1.0%)
- Chest pain, unspecified (1.0%)

By subgroup

- Z40–Z54 Persons encountering health services for specific procedures and health care (12.0%)
- I30–I52 Other forms of heart disease (6.8%)
- H30–H36 Disorders of choroid and retina (6.3%)
- S70–S79 Injuries to the hip and thigh (4.4%)
- I20–I25 Ischaemic heart diseases (3.8%)
- C43–C44 Melanoma and other malignant neoplasms of skin (3.7%)
- J10–J18 Influenza and pneumonia (3.1%)
- I60–I69 Cerebrovascular diseases (2.9%)
- H25–H28 Disorders of lens (2.9%)
- R00–R09 Symptoms and signs involving the circulatory and respiratory systems (2.8%)
- N30–N39 Other diseases of urinary system (2.4%)
- R50–R69 General symptoms and signs (2.3%)
- E09–E14 Impaired glucose regulation and diabetes mellitus (2.3%)
- K55–K63 Other diseases of intestines (2.1%)

11. Mental Health

11.1 Prevalence across the whole population

Mental disorder is common in New Zealand: 46.6% of the population¹⁹ are predicted to meet criteria for a disorder at some time in their lives. The Mental Health Survey 2006 on which this document was based, found that 39.5% of the population surveyed had already had a mental health disorder and 20.7% had a disorder in the past 12 months.

11.2 Socio demographic correlates

In the past 12 months, younger people have a higher prevalence of disorder and are more likely to report having ever had a disorder by any particular age. Females have a higher prevalence of anxiety disorder, major depression and eating disorders than males, whereas males have substantially a higher prevalence for substance use disorders than females. Prevalence is higher for people who are disadvantaged, whether measured by educational qualification, equivalised household income or using the small area index of deprivation (NZDep2001).

11.3 Ethnic comparisons

The prevalence of disorder in any period is higher for Maori and Pacific people than for the Other composite ethnic group. For disorder in the past 12 months, the prevalence is 29.5% for Maori, 24.4% for Pacific people and 19.3% for Others, which indicates that Maori and Pacific people have a greater burden due to mental health problems. Much of this burden appears to be because of the youthfulness of the Maori and Pacific populations and their relative socioeconomic disadvantage. After adjusting for sociodemographic correlates, no ethnic differences in the prevalence of anxiety disorders in the past 12 months are apparent, but even with adjustments the prevalence of bipolar disorder remains higher for Maori and Pacific people (Maori, 3.4%; Pacific people, 2.7%; Others 1.9%), and substance use disorder is higher for Maori (6.0%) (Pacific people, 3.2%; Others, 3.0%). Major depression shows a different pattern: after adjustment, Maori and Others have very similar prevalence (5.7%, 5.8%), whereas Pacific people have lower prevalence (3.5%).

11.4 Health service use across the whole population

People with more serious mental disorder in the past 12 months are more likely to have visited the health care sector for mental health reasons, including for problems with their use of alcohol or other drugs, in that period. However, the proportion making a mental health visit to the health care sector is low (only 58.0% of those with serious disorder, 36.5% of those with moderate disorder and 18.5% of those with mild disorder).

11.5 Health service use in NMDHB compared with the whole population

Only a small number of non-governmental organisations (NGO) reported data for 2007/08 to the National Collection, so non-governmental organisation data were excluded from their analysis²⁰. Figure 9 and Figure 10 which follow compare NMDHB with New Zealand as a whole in terms of Mental Health service usage reported to the Ministry of Health for 2007/08.²¹

It can be seen that NMDHB has a very much higher usage of services up to age 65. This could in part be due to:

- The fact that NGO data are excluded; NMDHB may use NGOs to provide services to a lesser extent than New Zealand as a whole so a greater proportion of its services are included here
- The different age structure of the Nelson-Marlborough region compared to New Zealand as a whole.

Figure 9 Mental Health Service Usage for Males

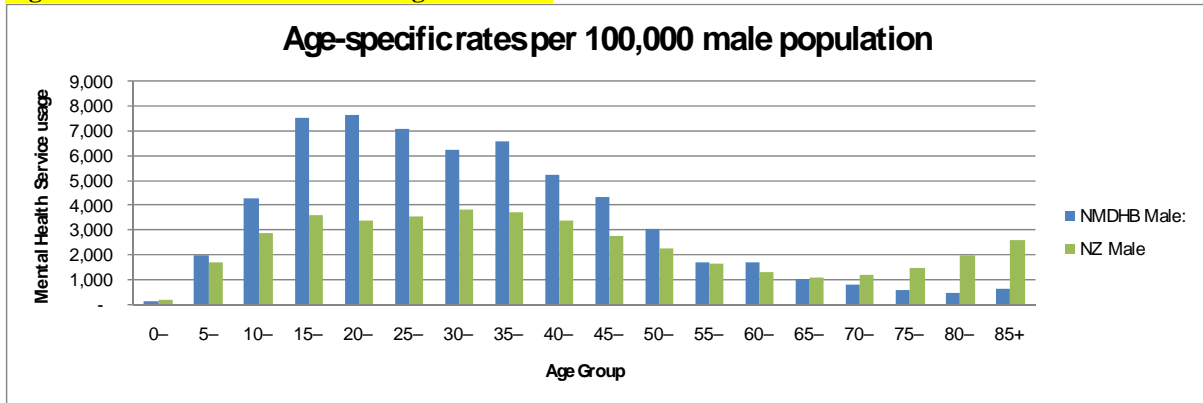
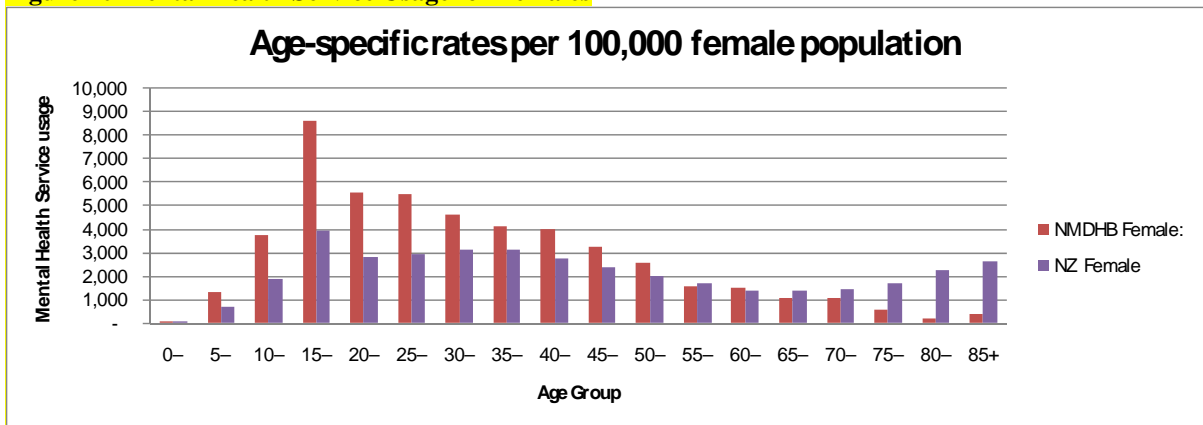


Figure 10 Mental Health Service Usage for Females



12. Ambulatory Sensitive Hospitalisation

Ambulatory sensitive hospitalisations are hospital admissions that could potentially have been avoided through community based or primary health care services. This analysis is based on data prepared by the Ministry of Health²² for the Year to end March 2010 (Quarter 4, financial year July 2009 to June 2010). Data are provided for the three age groups chosen by the Ministry of Health for monitoring this health target (0-4 years, 45-64 years, and 0-74 years).

Results for ASH are shown as an Indirectly Standardised Discharge Ratio (ISDR). This is the ratio of actual to expected ASH Hospitalisations. Expected hospitalisations are calculated for each ethnic group and DHB using base period data (in this case Year to end September 2008) as follows: for example for "other" ethnicity by applying national "other" ethnicity age and NZdeprivation quintile ASH rates to the "other" ethnicity population structure of each DHB by age and NZdep quintile.

The results for Quarter 4 2009_10 are shown below. The Indirectly Standardised ASH Discharge Ratio was calculated using Actual Volumes for the Year to end March 2010, and Expected Volumes calculated on Base Year (Year to end September 2008) National rates by ethnicity. These results are exceptionally good compared with the rest of New Zealand; two out of three age groups are significantly lower than base rate and only the Other (0-4) group is minimally over target.

Table 68 Overall Ambulatory Sensitive Hospitalisation results for Quarter 4 2009_10

Age group / ethnicity	Target	Indirectly Standardised ASH Discharge Ratio where Actual Volumes are for the Year to end March 2010, and Expected Volumes are calculated on Base Year National rates by ethnicity
Maori (0-74)	remain below 95% of the national rate	66.7 Significantly lower than base rate
Other (0-74)	remain at or below national level	87.3 Significantly lower than base rate
Maori (0-4)	remain at or below national level	77.8
Other (0-4)	remain at or below national level	100.1
Maori (45-64)	remain below 95% of the national rate	50.5 Significantly lower than base rate
Other (45-64)	remain below 95% of the national rate	76.4 Significantly lower than base rate

12.1 0-4 Years

The main causes of ambulatory sensitive hospitalisation for NMDHB people aged 0-4 years are:

- ENT infections (28.8%),
- Dental conditions (22.5%)
- Asthma (14.4%)
- Gastroenteritis (13.5%)

While Upper respiratory and ENT and Dental conditions are similar in ranking with the national ranking of conditions, these 2 conditions do have Indirect Standardised Discharge Ratios (ISDRs) higher than 100 indicating that they may be happening more in the NMDHB area than nationally; these ISDRs however, are not statistically significant.

Table 69 Main Causes of Ambulatory Sensitive Hospitalisation for 0-4 years, NMDHB, Year ended 30 March 2010

Condition	Maori NMDHB	Other NMDHB	NMDHB Total	% of NMDHB total	NMDHB Rank order	Nat. Rank order
Upper respiratory and ENT	22	78	100	28.8	1	1
Dental conditions	21	57	78	22.5	2	2
Asthma	12	38	50	14.4	3	3
Gastroenteritis/dehydration	6	41	47	13.5	4	4
Pneumonia	5	25	30	8.6	5	5
Cellulitis	3	10	13	3.7	6	6
Dermatitis and Eczema	3	6	9	2.6	8	7
Gastro oesophageal reflux disease (GORD)	1	7	8	2.3	9	8
Constipation	0	10	10	2.9	7	9
Bronchiectasis	0	1	1	0.3	10	10

Indirect Standardised Discharge Ratios for the rest of the conditions shown below are lower than 100 with “Maori” cellulitis and “Other” Gastroenteritis/dehydration in this age group showing a statistically significant lower rate.

Ratios were not able to be calculated for some conditions because the number of events was too small.

Table 70 Ambulatory Sensitive Hospitalisation for 0-4 years, NMDHB, Year ended 30 March 2010

Condition	Maori Indirect Standardised Discharge Ratios (ISDRs)	Statistical significance	Other Indirect Standardised Discharge Ratios (ISDRs)	Statistical significance
Upper respiratory and ENT	148.7		131.1	
Dental conditions	113.2		134.1	
Asthma	68.6		104.6	
Gastroenteritis/dehydration	42.4		57.6	Lower
Pneumonia	42.5		86.6	
Cellulitis	27.1	Lower	54.7	

12.2 45-64 Years

The main causes of ambulatory sensitive hospitalisation for NMDHB people aged 45-64 years are:

- Angina and chest pain (25%)
- Cellulitis (12%)
- Myocardial infarction (11%)
- Pneumonia (10.7%)
- Kidney/urinary infection

Interestingly, the pattern in terms of the ranking of conditions for NMDHB compared to the national ranking is slightly different with Nutrition deficiency and anaemia coming joint 6th with diabetes; higher

than Congestive heart failure, Kidney/urinary infection, and Asthma. This condition appears to be mainly cases of Iron deficiency anaemia, unspecified.

Table 71 Main Causes of Ambulatory Sensitive Hospitalisation for 45-64 years, NMDHB, Year ended 30 March 2010

Condition	Maori NMDHB	Other NMDHB	NMDHB Total	% of NMDHB total	NMDHB Rank order	Nat. Rank order
Angina and chest pain	7	123	130	25.1	1	1
Cellulitis	8	54	62	12.0	2	2
Pneumonia	6	49	55	10.7	4	3
Myocardial infarction	5	52	57	11.0	3	4
Diabetes	1	23	24	4.7	6	5
Congestive heart failure	5	14	19	3.7	10	6
Kidney/urinary infection	2	26	28	5.4	5	7
Gastroenteritis/dehydration	0	23	23	4.5	8	9
Asthma	1	14	15	2.9	11	8
Epilepsy	2	12	14	2.7	12	10
Nutrition deficiency and anaemia	1	23	24	4.7	6	11
Stroke	1	12	13	2.5	13	12
Dental conditions	3	19	22	4.3	9	13

Indirect Standardised Discharge Ratios for 45–64 year olds show that most ASH rates for NMDHB tend to be lower than rates for New Zealand as a whole.

Ratios were not able to be calculated for some conditions because the number of events was too small.

Table 72 Ambulatory Sensitive Hospitalisation for 45-64 years, NMDHB, Year ended 30 September 2010

Condition	Maori Indirect Standardised Discharge Ratios (ISDRs)	Statistical Significance	Other Indirect Standardised Discharge Ratios (ISDRs)	Statistical Significance
Angina and chest pain	51.0		83.8	
Cellulitis	68.0		71.6	
Pneumonia	63.5		87.9	
Myocardial infarction	67.0		81.6	
Diabetes	12.9	Lower	66.3	
Congestive heart failure	59.7		64.9	

12.3 0-74 Years

The main causes of ambulatory sensitive hospitalisation for NMDHB people aged 0-74 years were:

- Dental conditions (15.4%)
- Angina and chest pain (12.1%)

- Cellulitis (9.1%)
- Upper respiratory and ENT (8.8%)
- Pneumonia (8.5%)
- Asthma (7.1%)

Table 73 Main Causes of Ambulatory Sensitive Hospitalisation for 0-74 years, NMDHB, Year ended 30 March 2010

Condition	Maori NMDHB	Other NMDHB	NMDHB Total	% of NMDHB total	NMDHB Rank order	Nat. Rank order
Cellulitis	27	144	171	9.1	3	1
Dental conditions	55	232	287	15.4	1	2
Angina and chest pain	11	216	227	12.1	2	4
Pneumonia	18	141	159	8.5	5	3
Asthma	32	100	132	7.1	6	5
Upper respiratory and ENT	27	137	164	8.8	4	7
Gastroenteritis/dehydration	8	112	120	6.4	7	6
Diabetes	2	106	108	5.8	8	8
Kidney/urinary infection	13	73	86	4.6	10	9
Myocardial infarction	6	98	104	5.6	9	10

Indirect Standardised Discharge Ratios for 0-74 year olds show that most ASH rates for NMDHB are lower than rates for New Zealand as a whole. There are currently 2 exceptions to this:

- The Upper respiratory and ENT condition is higher than New Zealand as a whole although not statistically significant.
- Dental conditions are statistically significantly higher than New Zealand as a whole. While some of this high result may be due to the large population of Intellectual Disability Support Services patients, this is the only condition in which elective discharges are included for ASH so this high result shows that NMDHB is treating these patients.

Ratios were not able to be calculated for some conditions because the number of events was too small.

Table 74 Ambulatory Sensitive Hospitalisation for 0-74 years, NMDHB, Year ended 30 March 2010

Condition	Maori Indirect Standardised Discharge Ratios (ISDRs)	Statistical Significance	Other Indirect Standardised Discharge Ratios (ISDRs)	Statistical Significance
Cellulitis	46.5	Lower	64.0	Lower
Dental conditions	117.0		136.8	Higher
Angina and chest pain	50.5		82.1	Lower
Pneumonia	47.8	Lower	82.5	
Asthma	86.7		95.7	
Upper respiratory and ENT	113.8		124.5	

13. Suicide and Intentional Self Harm

The section on Mortality outlined that NMDHB had a higher rate of suicide 2003-2007 as a cause of death than New Zealand as a whole in 2007. More details surrounding this statement will be given here.

Each year approximately 500 New Zealanders die by suicide¹⁰; a number that is higher than the national road toll. Data suggest that suicide is the sixth-highest cause of avoidable deaths in those aged less than 75 years, accounting for approximately 6 percent of avoidable deaths. Mortality data for the NMDHB population for 2009 show Intentional self-harm as the cause of death for 83 deaths putting it in 16th place for the whole population of the DHB.

There are also more than 2500 admissions to hospital every year for intentional self-harm, excluding patients who were discharged from an emergency department and stayed less than 48 hours and patients who were re-admitted within two days of a previous admission for an intentional self-harm episode.

It is important to recognise that the motivation for intentional self-harm varies, and therefore hospitalisation data is not a measure of attempts to take one's life by suicide. The latest suicide and intentional self-harm data for 2007 will be outlined here, but no attempt to explain the causes of suicidal behaviour or reasons for intentional self harm will be given. However, suicide is a serious health and social issue and as such is an indicator of social wellbeing (Associate Minister of Health 2006).

13.1 Suicide

Nationally in 2007, the suicide rate was 11.0 deaths per 100,000 population. The male to female ratio was 3.6:1; the male rate was 17.4 per 100,000 male population, the female rate was 4.9 per 100,000 population. The Maori rate was 16.1 and the non Maori rate was 9.9 (approximately 60% of the Maori rate). The Male peak age group was 30-34 years at 33.9 deaths per 100,000 and the female peak age group was 40-44 years at 10.3 deaths per 100,000. The female peak age group has changed from 15-19 years to 40-44 years since 1997. There is a gradient by deprivation. With 13.3 deaths per 100,000 in the most deprived areas and 7.7 in the least deprived.

The national suicide rates have reduced since 1985 as shown in Table 75 below

Table 75 Suicide deaths and age standardised rates 1995 - 2007

Year	Number	Rate
1985	338	10.0
1986	414	12.3
1987	463	13.6
1988	484	13.9
1989	465	13.4
1990	455	13.0
1991	474	13.7
1992	493	14.1
1993	443	12.5
1994	512	14.1
1995	543	15.0

Year	Number	Rate
1996	540	14.7
1997	561	14.8
1998	577	15.1
1999	516	13.4
2000	458	11.9
2001	507	12.9
2002	466	11.6
2003	517	12.4
2004	488	11.7
2005	511	12.2
2006	526	12.3
2007	483	11.0

The rates by DHB are very variable as shown in Table 76 below for 2003-2007. Nelson Marlborough is right on the national New Zealand rate of 11.9 deaths per 100, population in that period.

Table 76 Suicide deaths and age-standardised rates, by DHB, 2003–2007

DHB	Number	Rate
Northland	116	17.1
Waitemata	240	9.2
Auckland	223	9.5
Counties Manukau	259	11.9
Waikato	197	11.3
Lakes	62	12.5
Bay of Plenty	152	15.6
Tairāwhiti	41	18.5
Hawke's Bay	112	15.3
Taranaki	73	14.4
MidCentral	127	15.4
Whanganui	50	16.8
Capital & Coast	132	8.9
Hutt Valley	59	8.6
Wairarapa	37	20.3
Nelson Marlborough	83	11.9
West Coast	24	13.8
Canterbury	306	11.9
South Canterbury	30	11.7
Otago	110	11.3
Southland	82	15.4

Figure 11 below shows the age standardised death rates per 100,000 for 2003-2007 graphically. Nelson Marlborough is right on the national rate. But it should be borne in mind that NMDHB has:

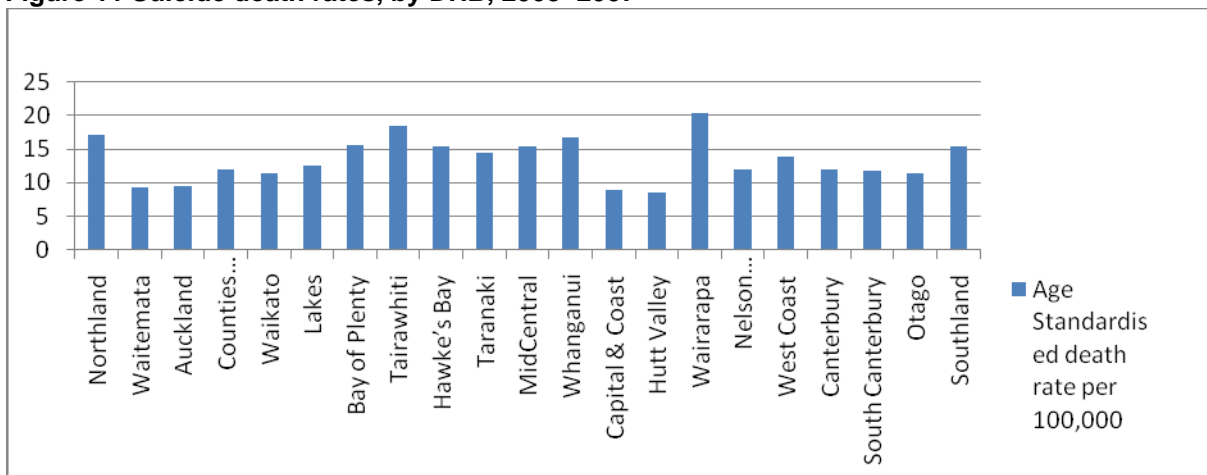
- A lower proportion of the population who live in the most deprived quintile than with New Zealand as a whole (7.3% of the NMDHB population live in Quintile 5 areas)

compared with about 20% for New Zealand). (see Table 42 NMDHB Population Distribution by NZDep2006 Quintile (%) on page 24

- A lower percentage Maori population than New Zealand as a whole. (8.4% compared with 14.0)

Being Maori (as opposed to non Maori) and being more deprived increase the suicide rate. This would lead one to predict a lower than national rate for suicide, other things being equal; so NMDHB has a higher suicide rate than expected.

Figure 11 Suicide death rates, by DHB, 2003–2007



13.2 Intentional Self Harm

Care is taken when extracting data for the analysis of intentional self harm in order to allow as much consistency as possible over time and across DHBs. Filters are applied in order to:

- Exclude patients who were discharged from an emergency department with a length of stay of less than 2 days
- Exclude any readmission for an intentional self harm incident within 2 days of a previous admission for intentional self harm. This is to prevent transfers from being counted as an additional event.

By excluding these two areas, consistency over time and across DHBs is more achievable.

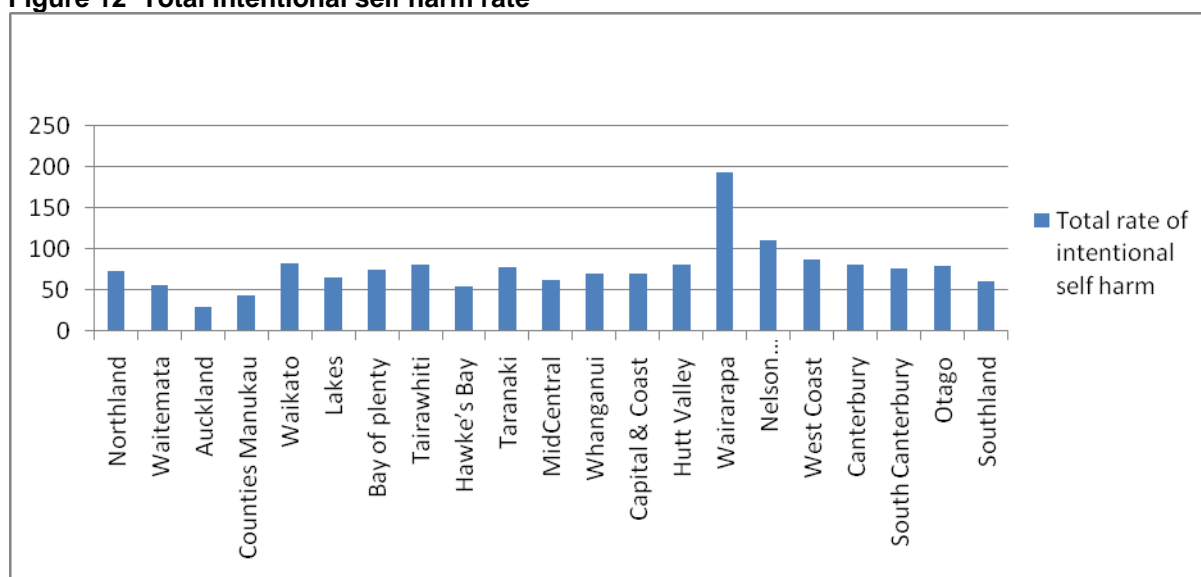
While men predominate in suicide (with a rate ratio of 3.6:1 male:female), hospitalisation for intentional self harm is more common among women. Nationally, in 2007 there was a rate ratio of 1.8 female:male; the NMDHB rate ratio was 2.5. Overall, the ratio is very variable ranging from 1.2 in Auckland to 3.6 in Wairarapa. This is shown in Table 77 Intentional Self Harm volumes and rates by gender and DHB below.

Wairarapa had the highest of rate intentional self harm at 193.3 hospitalisations per 100,000 population. Nelson Marlborough is second at 110.3 with the rest of the country falling between 29.9 in Auckland and 87.2 on the West Coast. This is shown in Figure 12.

Table 77 Intentional Self Harm volumes and rates by gender and DHB

	Males		Females		Total		F:M
	Number	Rate	Number	Rate	Number	Rate	Rate ratio
North Island							
Northland	40	58.8	59	89.1	99	73.7	1.5
Waitemata	106	43	181	70	287	56.5	1.6
Auckland	63	27.6	73	32.8	136	29.9	1.2
Counties Manukau	68	31	124	55.2	192	43.1	1.8
Waikato	112	69.6	164	94.6	276	82.4	1.4
Lakes	23	53.8	36	78.1	59	65.1	1.5
Bay of plenty	55	61	84	89.8	139	75.2	1.5
Tairawhiti	13	63.8	18	97.9	31	81.5	1.5
Hawke's Bay	33	51	41	58.9	74	54.9	1.2
Taranaki	18	36.2	61	118.3	79	77.3	3.3
MidCentral	30	39.6	69	82.7	99	61.6	2.1
Whanganui	17	60.2	25	79.1	42	69.7	1.3
Capital & Coast	61	42	142	97.4	203	70.4	2.3
Hutt Valley	42	63.4	70	84	112	80.2	1.3
Wairarapa	12	84	50	305.1	62	193.3	3.6
South Island							
Nelson Marlborough	38	63.8	89	160	127	110.3	2.5
West Coast	8	45	19	132.2	27	87.2	2.9
Canterbury	116	47.5	265	114.7	381	80.9	2.4
South Canterbury	11	43.6	27	111.6	38	76.5	2.6
Otago	43	48.7	99	108.1	142	78.9	2.2
Southland	26	48.4	38	72.3	64	60.3	1.5

Figure 12 Total Intentional self harm rate



14. Obesity

Obesity is one of the most important modifiable risk factors for a number of major diseases, including type 2 diabetes mellitus, ischaemic heart disease, ischaemic stroke and several common cancers.

The results of the Obesity Indicators from “An indication of New Zealanders Health”²³ are below. These show that NMDHB has a lower obesity rate than New Zealand as a whole although it is not a statistically significant difference

Table 78 Results of Obesity Indicators from “An indication of New Zealanders Health” (Ministry of Health, 2007) – Age-standardised rates

Reducing obesity	New Zealand	NMDHB
Overweight, 15+ years, percent, 2002/03	34.0 (32.6–35.3)	33.8 (31.0–36.6)
Obesity, 15+ years, percent, 2002/03	20.1 (19.0–21.2)	17.8 (15.6–20.1)

Then there are the results of the Nutrition and Physical activity (NPA) Baseline Survey which paint a more detailed story.²⁴

This was a survey of the Nelson Marlborough community population aged 16 years and over. 1892 telephone interviews were completed between March and July, 2008. 600 people were sampled from each Territorial Authority (TA). Of this 600 person sample, 150 were Maori and 450 non-Maori (all other ethnicities) to allow a sub sample large enough to make statistical comparisons.

This survey gives some great data and summarises it too. We are mostly statistically significantly thinner than the national rate, the exception being that the Maori overweight group is statistically significantly larger than the national average. However, this may be a consequence of a statistically significantly smaller Maori obese group than the national rate so NMDHB effectively has a downgraded weight problem in Maori (from obese to overweight).

Table 79 % of Population falling into each BMI category

	Underweight		Healthy Weight		Overweight		Obese	
	NMDHB	National	NMDHB	National	NMDHB	National	NMDHB	National
Territorial Authority								
Tasman	9.0	1.4 (1.1-1.8)	46.5	38.1 (36.9-39.2)	31.8	35 (34.0-36.0)	12.7	25.4 (24.5-26.4)
Nelson	8.1	1.4 (1.1-1.8)	54.9	38.1 (36.9-39.2)	27.7	35 (34.0-36.0)	9.2	25.4 (24.5-26.4)
Marlborough	9.8	1.4 (1.1-1.8)	48.5	38.1 (36.9-39.2)	26.3	35 (34.0-36.0)	15.4	25.4 (24.5-26.4)
Ethnicity								
Maori	9.8	1 (0.6-1.7)	34.9	24.1 (22.0-26.2)	34.5	31.7 (29.6-33.7)	20.8	43.2 (41.2-45.2)
Non-Maori	9.0	1.6 (1.2-2.0)	51.1	40 (38.8-41.3)	28.2	35.2 (34.1-36.3)	11.7	23.2 (22.1-24.3)
Age group								
16-24	6.6	3.2 (1.9-4.4)	73.3	58.7 (55.5-61.9)	9.0	24 (21.3-26.6)	11.2	14.2 (12.3-16.1)

	Underweight		Healthy Weight		Overweight		Obese	
	NMDHB	National	NMDHB	National	NMDHB	National	NMDHB	National
25-34	9.6	1.6 (1.0-2.5)	45.4	39.4 (36.4-42.5)	33.6	34.6 (31.7-37.5)	11.4	24.4 (22.0-26.8)
35-44	10.7	0.6 (0.3-1.0)	43.1	33 (30.8-35.2)	32.3	38 (36.0-40.1)	13.9	28.4 (26.3-30.5)
45-54	6.8	0.7 (0.3-1.4)	46.0	29.1 (26.8-31.4)	34.0	39.7 (37.4-42.0)	13.2	30.5 (28.0-33.0)
55-64	7.8	0.6 (0.2-1.1)	42.3	25.1 (22.7-27.5)	38	38.5 (35.6-41.4)	11.9	35.9 (33.1-38.6)
65-74	11.7	0.8 (0.3-1.5)	37.9	23.3 (20.5-26.1)	36.9	43.2 (39.8-46.5)	13.5	32.8 (29.8-35.9)
75+	14.4	1.3 (0.7-2.3)	52.9	32.8 (29.6-36.1)	26.5	45 (41.4-48.5)	6.2	20.8 (18.0-23.7)
Gender								
Male	4.8	1.3 (0.8-1.8)	50.3	33.2 (31.3-35.0)	31.6	40.7 (39.1-42.3)	13.2	24.8 (23.3-26.2)
Female	13.0	1.6 (1.1-2.1)	50.1	43 (41.5-44.5)	25.4	29.4 (27.9-30.8)	11.5	26.1 (24.7-27.5)
Socio-Economic Status (SES)*								
1	9.2	1.2 (0.7-1.9)	42.1	41.2 (38.1-44.3)	38.6	36.7 (33.8-39.5)	10.2	20.9 (18.8-23.0)
2	6.5	1.3 (0.7-1.9)	53.5	39.1 (36.5-41.8)	27.8	39 (36.5-41.5)	12.1	20.6 (18.4-22.8)
3	11.8	2.1 (0.9-3.2)	47.4	39.6 (36.9-42.3)	26.9	35.3 (32.9-37.7)	13.9	23 (20.9-25.2)
4	8.3	0.8 (0.5-1.3)	53.9	39.7 (37.0-42.4)	24.6	33.5 (31.2-35.7)	13.1	26 (23.7-28.4)
5	9.2	1.9 (1.0-2.9)	57.9	29.9 (26.6-33.2)	22.5	30.5 (28.4-32.7)	10.5	37.6 (34.8-40.4)
Total	9.0	1.4 (1.1-1.8)	50.2	38.1 (36.9-39.2)	28.5	35 (34.0-36.0)	12.3	25.4 (24.5-26.4)

The Nutrition and Physical activity (NPA) Baseline Survey, of course, looks at a sample of the entire population of NMDHB. A less healthy subset of the population is represented by the people who access vascular risk assessments. These are selected based on the criteria in Table 80²⁵.

Table 80 The age to start cardiovascular disease and diabetes risk assessment

Group	Men	Women
Asymptomatic people without known risk factors	Age 45 or more	Age 55 or more
Maori, Pacific peoples or people from the Indian subcontinent*	Age 35 or more	Age 45 or more

Group	Men	Women
People with other known cardiovascular risk factors or at high risk of developing diabetes: <ul style="list-style-type: none"> • Family history risk factors <ul style="list-style-type: none"> ○ Diabetes in first-degree relative (parent, brother or sister) ○ Premature coronary heart disease or ischaemic stroke in a first-degree relative (father or brother <55 years, mother or sister <65 years) • Personal history risk factors <ul style="list-style-type: none"> ○ People who smoke (or who have quit only in the last 12 months) ○ Gestational diabetes, polycystic ovary syndrome ○ Prior blood pressure (BP) 160/95 mm Hg, prior TC:HDL ratio 7 ○ Known IGT (impaired glucose tolerance) or IFG (impaired fasting glucose) ○ BMI 30 or truncal obesity (waist circumference 100 cm in men or 90 cm in women) ○ eGFR† <60 ml/min/1.73 m² 	Age 35 or more	Age 45 or more
People with diabetes	Annually from the time of diagnosis	

Table 81 below shows the BMI categories of the VRA population in the Nelson Bays PHO²⁶ in the 35-44, 45-54 and 55-64 age groups in which a total of 8,856 assessments have been done.

Overall 28% of this population was obese but a massive 78% of the Pacific population aged 35-44, 54% of Maori, and 44% of other 35-44 year olds tested were obese, The percentages reduce somewhat in the 45-54 age group to 41% of Pacific, 45% of Maori and 28% of other. They continue reducing in the 55-64 age group to 50% of Pacific, 46% of Maori and 24% of other.

Table 81 Volumes and % of VRA patients in BMI categories

age group	ethnic group	Values	Under weight <20	Healthy 20-24	Over weight 25-29	Obese 30-34	Obese 35-39	Obese 40+	Grand Total	Total % Obese
35-44	Maori	Patients	1	20	40	42	13	17	133	
		%	1%	15%	30%	32%	10%	13%	100%	54%
	other	Patients	1	50	103	71	29	21	275	
		%	0%	18%	37%	26%	11%	8%	100%	44%
	Pacific	Patients		1	3	8	2	4	18	
		%	0%	6%	17%	44%	11%	22%	100%	78%
35-44 Patients			2	71	146	121	44	42	426	
35-44		%	0%	17%	34%	28%	10%	10%	100%	49%
45-54	Maori	Patients	5	52	90	66	32	21	266	
		%	2%	20%	34%	25%	12%	8%	100%	45%
	other	Patients	40	663	1309	555	169	67	2803	
		%	1%	24%	47%	20%	6%	2%	100%	28%
	Pacific	Patients		5	14	9	3	1	32	
		%	0%	16%	44%	28%	9%	3%	100%	41%
45-54 Patients			45	720	1413	630	204	89	3101	
45-54		%	1%	23%	46%	20%	7%	3%	100%	30%

age group	ethnic group	Values	Under weight <20	Healthy 20-24	Over weight 25-29	Obese 30-34	Obese 35-39	Obese 40+	Grand Total	Total % Obese
%										
55-64	Maori	Patients	5	33	57	46	20	15	176	
		%	3%	19%	32%	26%	11%	9%	100%	46%
	other	Patients	135	1561	2181	921	235	102	5135	
		%	3%	30%	42%	18%	5%	2%	100%	24%
	Pacific	Patients		1	8	5	2	2	18	
		%	0%	6%	44%	28%	11%	11%	100%	50%
55-64 Patients			140	1595	2246	972	257	119	5329	
55-64 %			3%	30%	42%	18%	5%	2%	100%	25%
Total Patients			187	2386	3805	1723	505	250	8856	
Total %			2%	27%	43%	19%	6%	3%	100%	28%

15. New Zealand Health Survey, 2006/07, Key Results

The New Zealand Health Survey (2006/07) has not been updated since 2008. Key results from the New Zealand Health Survey (2006/07) that are relevant to the NMDHB are summarised below. This includes three types of results: grouped DHB estimates for the adult population, grouped DHB estimates for the child population and synthetic predictions of rates for individual DHBs. These results are summarised below and data tables are provided in the appendix.

15.1 Grouped DHB Adult Estimates

These results are based on the DHB groupings that were presented in the Public Health Intelligence document “A Portrait of Health”²³. They are direct survey estimates. It was necessary to calculate these estimates for groupings of DHBs when the DHB population size and consequently the survey sample size were too small to provide reliable estimates for an individual DHB. NMDHB was included in the “Other South Island DHBs” grouping. (The DHBs included in this grouping were Nelson-Marlborough, West Coast, South Canterbury, Otago and Southland). It is expected that these grouped DHB survey estimates will give a reasonably accurate indication of what results would be for NMDHB.

The age-standardised rates for the “Other South Island DHBs” grouping were analysed and compared with the rates for New Zealand as a whole.

This showed that compared with New Zealand as a whole, a significantly higher proportion of this DHB grouping:

- Eat three or more servings of vegetables a day
- Undertake regular physical activity (30 minutes a day on 5 or more of the past 7 days)
- Had visited an emergency department at a public hospital in the past 12 months

A significantly lower proportion of this DHB grouping:

- Were overweight
- Were obese or overweight
- Had never tried smoking
- Had unmet need for oral health care in past 12 months

15.2 Grouped Child Estimates

These results are similar to the grouped adult estimates with NMDHB included in the “Other South Island DHBs” grouping.

The age-standardised rates for the “Other South Island DHBs” grouping were analysed and compared with the rates for New Zealand as a whole.

This showed that compared with New Zealand as a whole, a significantly higher proportion of this DHB grouping:

- Had seen an oral health care worker in past 12 months
- Had visited an emergency department at a public hospital in the past 12 months

A significantly lower proportion of this DHB grouping:

- Had never seen an oral health care worker
- Had never had a filling (Carries free)

15.3 Synthetic Predictions

These are crude predictions of gender and ethnic specific rates in each DHB. They are equivalent to synthetic estimates, where DHB effects and gender and ethnic effects are modelled as main effects only (no interactions between these effects are modelled). These predictions are of more limited use than the other estimates presented by DHB. They are not likely to reflect the impact of targeted health programmes in specific regions so their use for evaluation purposes is limited.

This analysis showed that there were no indicators for which the NMDHB rate was statistically significantly higher than the rate for New Zealand as a whole.

However, compared with New Zealand, NMDHB had a statistically significantly lower rate for:

- Diabetes prevalence for the overall population
- Proportion of the population who are currently taking medication for high blood cholesterol (for the overall population and for non-Maori)

Apparent differences in prevalence between Maori and non-Maori can be seen by looking at the synthetic result table in the Appendix. It should be noted however that because of the small number of events and the low prevalence of many of these indicators, the Maori/non-Maori differences tended to not be statistically significant.

16. Appendix

16.1 Census Population Data

Table 82 Nelson-Marlborough DHB Population by Age and Gender, 2006 Census

	Female	Male	Total
00-01	804	783	1590
01-04	3075	3126	6201
05-09	4074	4425	8499
10-14	4536	4944	9483
15-19	4122	4518	8640
20-24	2868	3183	6051
25-29	3207	3102	6309
30-34	4161	3933	8094
35-39	4908	4416	9324
40-44	5424	4935	10359
45-49	5376	5154	10530
50-54	4713	4647	9360
55-59	4668	4599	9264
60-64	3567	3621	7188
65-69	2787	2802	5589
70-74	2331	2217	4551
75-79	2112	1776	3891
80-84	1713	1224	2940
85+	1470	738	2211
All Ages	65916	64146	130065

Table 83 Nelson-Marlborough DHB Population by Age and Ethnicity, 2006 Census

	Maori	non-Maori	Total
00-01	255	1335	1590
01-04	927	5274	6201
05-09	1263	7236	8499
10-14	1356	8127	9483
15-19	1206	7434	8640
20-24	723	5328	6051
25-29	681	5628	6309
30-34	771	7323	8094
35-39	759	8565	9324
40-44	768	9591	10359
45-49	657	9873	10530
50-54	471	8889	9360
55-59	372	8892	9264
60-64	282	6906	7188
65-69	201	5388	5589
70-74	99	4452	4551
75-79	75	3816	3891
80-84	48	2892	2940
85+	9	2202	2211
All Ages	10914	119151	130065

Table 84 Nelson-Marlborough DHB Population by Age and Detailed Ethnicity, 2006 Census

	Asian	European	Maori	MELAA	Other	Pacific	Total
00-01	36	1017	255	9	255	27	1590
01-04	138	4020	927	33	954	132	6201
05-09	171	5544	1263	33	1338	141	8499
10-14	162	6351	1356	39	1443	138	9483
15-19	204	5967	1206	33	1095	126	8640
20-24	180	3990	723	51	975	120	6051
25-29	249	4161	681	48	1068	108	6309
30-34	201	5430	771	63	1530	96	8094
35-39	183	6489	759	36	1767	87	9324
40-44	195	7245	768	36	2013	93	10359
45-49	150	7539	657	24	2079	81	10530
50-54	102	6672	471	6	2064	39	9360
55-59	75	6756	372	9	2022	33	9264
60-64	45	5448	282	3	1389	27	7188
65-69	18	4338	201	0	1023	21	5589
70-74	12	3750	99	0	678	12	4551
75-79	6	3381	75	6	414	9	3891
80-84	6	2604	48	0	288	0	2940
85+	3	1986	9	0	204	0	2211
All Ages	2127	92685	10914	432	22602	1314	130065

Note: MELAA = Middle Eastern/Latin American/African

16.2 Population Projections

Table 85 Nelson-Marlborough DHB Projected Population, Total, 2006-2026

	2006	2007	2008	2009	2010	2011	2016	2021	2026
00-04	8010	8210	8355	8265	8280	8220	7635	7400	7290
05-09	8605	8525	8405	8570	8515	8550	8735	8140	7920
10-14	9580	9275	9140	8950	8935	8935	8840	9020	8450
15-19	9030	9250	9285	9210	9040	8795	8145	8040	8240
20-24	6290	6295	6555	6770	7010	7275	7010	6350	6260
25-29	6600	6570	6475	6455	6365	6310	7220	6970	6290
30-34	8240	7800	7495	7240	7110	7100	6765	7660	7410
35-39	9540	9625	9630	9535	9360	9055	7880	7540	8440
40-44	10475	10265	10010	9980	10050	10110	9585	8450	8100
45-49	10890	11015	11235	11170	11040	10755	10395	9870	8740
50-54	9700	9925	10190	10545	10780	11065	10920	10570	10060
55-59	9565	9535	9430	9455	9550	9725	11060	10940	10600
60-64	7410	7805	8465	8860	9235	9475	9670	10990	10900
65-69	5840	6275	6410	6730	7000	7230	9255	9460	10750
70-74	4635	4735	4865	4955	5205	5520	6830	8740	8980
75-79	3955	3980	3990	4055	4105	4135	4940	6160	7920
80-84	3020	3010	3070	3160	3135	3175	3370	4090	5150
85-89	1540	1680	1800	1900	1990	2070	2355	2570	3220
90-94	570	610	630	650	730	790	1040	1250	1390
95+	150	160	180	190	220	240	350	530	690
Total	133645	134545	135615	136645	137655	138530	142000	144740	146800

Table 86 Nelson-Marlborough DHB Projected Population, Maori, 2006-2026

	2006	2007	2008	2009	2010	2011	2016	2021	2026
00-04	1260	1340	1440	1470	1560	1630	1630	1670	1730
05-09	1330	1330	1280	1290	1260	1270	1640	1640	1680
10-14	1410	1350	1360	1350	1350	1330	1260	1620	1640
15-19	1320	1360	1360	1380	1310	1280	1220	1150	1510
20-24	860	900	960	990	1090	1150	1120	1060	990
25-29	770	790	800	830	800	830	1110	1090	1020
30-34	840	790	770	730	760	770	820	1100	1080
35-39	820	830	850	860	870	840	780	830	1100
40-44	830	820	780	780	780	810	820	770	820
45-49	710	760	820	830	830	810	810	820	770
50-54	510	550	570	620	670	710	810	810	820
55-59	420	430	470	490	510	500	700	800	790
60-64	310	320	320	350	370	400	490	690	790
65-69	220	240	260	260	280	290	400	480	660
70-74	110	130	140	160	200	210	280	370	450
75-79	80	90	100	110	110	110	190	260	350
80-84	60	50	60	70	70	80	100	170	230
85-89	0	20	20	30	30	30	60	90	140
90-94	0	0	0	0	10	10	20	30	50
95+	0	0	0	0	0	0	0	10	10
Total	11860	12100	12360	12600	12860	13060	14260	15460	16630

Table 87 Population by Census Area Unit, NMDHB, 1996-2006

TA	CAU	CAU Name	1996	2001	2006	% Change 01-06	Numeric change 01-06
Tasman District	581717	Aniseed Hill	357	435	624	43.4%	189
Nelson City	581715	Ngawhatu	636	972	1344	38.3%	372
Nelson City	581812	Whangamoa	558	675	870	28.9%	195
Tasman District	581822	Brightwater	1239	1425	1791	25.7%	366
Nelson City	581723	Saxton	990	1350	1695	25.6%	345
Tasman District	581823	Wakefield	1419	1497	1875	25.3%	378
Marlborough District	580444	Wairau	3495	3852	4569	18.6%	717
Marlborough District	580442	Waikawa	843	987	1158	17.3%	171
Tasman District	581825	Mapua	1269	1617	1878	16.1%	261
Marlborough District	580420	Omaka	1080	1110	1269	14.3%	159
Marlborough District	581260	Witherlea	3687	3993	4542	13.7%	549
Tasman District	584201	Richmond East	4107	5052	5727	13.4%	675
Tasman District	581836	Wai-Iti	4206	4365	4887	12.0%	522
Nelson City	583600	Nayland	663	660	735	11.4%	75
Marlborough District	580430	Spring Creek-Riverlands	1413	1461	1617	10.7%	156
Marlborough District	581210	Springlands	3240	3450	3807	10.3%	357
Nelson City	582200	Port Nelson	42	90	99	10.0%	9
Nelson City	583700	Enner Glynn	2718	2799	3075	9.9%	276
Tasman District	584202	Richmond West	4785	5523	5985	8.4%	462
Marlborough District	580802	Seddon	546	474	513	8.2%	39
Tasman District	584303	Motueka East	3279	3453	3708	7.4%	255
Tasman District	581720	Hope	1062	1113	1191	7.0%	78
Marlborough District	580446	Marlborough Sounds Terrestrial	3207	3195	3408	6.7%	213
Tasman District	581833	Motueka Outer	3543	3579	3813	6.5%	234
Marlborough District	581250	Redwoodtown	4653	4881	5148	5.5%	267
Tasman District	581844	Tapawera	408	384	405	5.5%	21
Marlborough District	580300	Renwick	1722	1785	1875	5.0%	90
Nelson City	584000	Langbein	3030	3042	3192	4.9%	150
Nelson City	581713	Glenduan	366	426	447	4.9%	21
Tasman District	581726	Ranzau	678	696	729	4.7%	33
Marlborough District	581230	Blenheim Central	2565	2616	2736	4.6%	120
Marlborough District	581240	Whitney	3924	4005	4161	3.9%	156
Nelson City	582300	The Wood	2667	2730	2820	3.3%	90
Nelson City	583100	Tahuna Hills	2058	2061	2127	3.2%	66
Marlborough District	580200	Havelock	504	471	486	3.2%	15
Tasman District	581841	Golden Downs	738	885	912	3.1%	27
Marlborough District	581220	Mayfield	2568	2619	2694	2.9%	75
Nelson City	583900	Isel Park	2805	2691	2766	2.8%	75
Nelson City	582100	Atawhai	1953	2154	2208	2.5%	54
Nelson City	583300	Grampians	1881	1986	2034	2.4%	48
Tasman District	581601	Golden Bay	3474	3603	3678	2.1%	75
Nelson City	582402	Washington	2715	2721	2772	1.9%	51
Nelson City	583202	Broads	1509	1539	1563	1.6%	24
Nelson City	583000	Tahunanui	2007	1986	2001	0.8%	15
Marlborough District	580801	Ward	897	897	903	0.7%	6
Marlborough District	580410	Woodbourne	900	672	675	0.4%	3
Tasman District	581724	Best Island	117	87	87	0.0%	0
Tasman District	581835	Waimea Inlet West	12	6	6	0.0%	0

TA	CAU	CAU Name	1996	2001	2006	% Change 01-06	Numeric change 01-06
Marlborough District	580600	Severn	3	6	6	0.0%	0
Tasman District	584301	Motueka West	3315	3429	3414	-0.4%	-15
Nelson City	583500	Nelson Airport	798	849	843	-0.7%	-6
Nelson City	582600	Maitai	663	603	597	-1.0%	-6
Nelson City	582000	Clifton	1095	1098	1086	-1.1%	-12
Nelson City	583800	Maitlands	2247	2412	2385	-1.1%	-27
Nelson City	583400	The Brook	1170	1182	1167	-1.3%	-15
Nelson City	582700	Kirks	915	813	795	-2.2%	-18
Marlborough District	581100	Picton	3060	3000	2925	-2.5%	-75
Nelson City	582500	Trafalgar	417	420	408	-2.9%	-12
Tasman District	581842	Lake Rotoroa	582	621	603	-2.9%	-18
Tasman District	581602	Takaka	1224	1188	1152	-3.0%	-36
Tasman District	581850	Riwaka	858	876	849	-3.1%	-27
Nelson City	583201	Toi Toi	1590	1665	1593	-4.3%	-72
Nelson City	582900	Atmore	1311	1278	1215	-4.9%	-63
Nelson City	582800	Bronte	1878	1815	1713	-5.6%	-102
Nelson City	582401	Britannia	1464	1443	1335	-7.5%	-108
Tasman District	581843	Murchison	585	555	501	-9.7%	-54
Tasman District	581832	Kaiteriteri	609	870	735	-15.5%	-135
Tasman District	581811	Richmond Hill	75	69	57	-17.4%	-12
Marlborough District	580445	Marlborough Sounds Coastal Marine	87	69	51	-26.1%	-18
Tasman District	581834	Rabbit Island	9	12	6	-50.0%	-6
Tasman District	584305	Jackett Island	18	12	3	-75.0%	-9
Nelson City	623801	Inlet-Tasman Bay	96	114	3	-97.4%	-111
Nelson City	581721	Saxton Island	0	0	3	#DIV/0!	3
Nelson City	581722	Waimea Inlet East	0	0	0	#DIV/0!	0
Tasman District	581725	Bell Island	0	0	0	#DIV/0!	0
Tasman District	581831	Inlet-Motueka	0	0	0	#DIV/0!	0
Tasman District	584304	Moutere Inlet	0	0	0	#DIV/0!	0
Tasman District	623803	Oceanic-Tasman Region	6	0	0	#DIV/0!	0
Tasman District	623900	Inlet-Ligar Bay	0	0	0	#DIV/0!	0

16.3 Population Estimates

Table 88 NMDHB Population Estimates, 30 June 1996 – 30 June 2006

	1996	2001	2006	%Change 2001-06	Numeric Change 2001-06
0-4	8560	8040	8000	-0.5%	-40
5-9	9170	9200	8600	-6.5%	-600
10-14	8580	9880	9570	-3.1%	-310
15-19	7830	8210	9030	10.0%	820
20-24	7480	6030	6290	4.3%	260
25-29	8190	7300	6600	-9.6%	-700
30-34	8970	8600	8230	-4.3%	-370
35-39	9540	9720	9540	-1.9%	-180
40-44	8800	10170	10460	2.9%	290
45-49	8590	9060	10890	20.2%	1830
50-54	6730	9020	9700	7.5%	680
55-59	5670	7130	9560	34.1%	2430
60-64	4900	5850	7400	26.5%	1550
65-69	4910	4920	5850	18.9%	930
70-74	4490	4570	4650	1.8%	80
75-79	3250	3940	3950	0.3%	10
80-84	2090	2470	3020	22.3%	550
85+	1370	1910	2280	19.4%	370
Total	119120	126020	133620	6.0%	7600

Table 89 NMDHB Population Estimates by Ethnicity, 30 June 1996 – 30 June 2006

	Maori			non-Maori			Total		
	1996	2001	2006	1996	2001	2006	1996	2001	2006
0-4	1370	1410	1250	7190	6630	6750	8560	8040	8000
5-9	1280	1430	1330	7890	7770	7270	9170	9200	8600
10-14	1110	1320	1400	7470	8560	8170	8580	9880	9570
15-19	1030	1030	1320	6800	7180	7710	7830	8210	9030
20-24	900	800	860	6580	5230	5430	7480	6030	6290
25-29	930	840	770	7260	6460	5830	8190	7300	6600
30-34	850	830	830	8120	7770	7400	8970	8600	8230
35-39	710	840	830	8830	8880	8710	9540	9720	9540
40-44	530	670	820	8270	9500	9640	8800	10170	10460
45-49	420	490	710	8170	8570	10180	8590	9060	10890
50-54	330	400	510	6400	8620	9190	6730	9020	9700
55-59	260	300	420	5410	6830	9140	5670	7130	9560
60-64	180	240	310	4720	5610	7090	4900	5850	7400
65-69	120	130	220	4790	4790	5630	4910	4920	5850
70-74	100	90	120	4390	4480	4530	4490	4570	4650
75-79	30	70	80	3220	3870	3870	3250	3940	3950
80-84	20	30	50	2070	2440	2970	2090	2470	3020
85+	10	0	10	1360	1910	2270	1370	1910	2280
Total	10180	10920	11840	108940	115100	121780	119120	126020	133620

16.4 Socio-demographic Data Tables

1.1.8 Birthplace

Table 90 Birthplace of NMDHB Residents, 2006

	Tasman District	Nelson City	Marlborough District	NMDHB
New Zealand	36,276	33,741	35,154	105,171
Australia	843	858	648	2,349
Pacific Islands	102	285	243	630
UK and Ireland	3,330	3,774	2,556	9,660
Europe (excl. UK and Ireland)	1,065	987	636	2,688
North America	474	516	294	1,284
Asia	438	819	498	1,755
Other	420	465	519	1,404
Total Overseas	6,672	7,710	5,400	19,782
Not Elsewhere Included	1,677	1,440	1,995	5,112
Total	44,625	42,888	42,546	130,059

1.1.9 Marital Status

Table 91 Legal Marital Status of NMDHB Residents (aged 15+), 2006

	Tasman District	Nelson City	Marlborough District	NMDHB
Never Married and Never Joined in a Civil Union	8769	10521	8526	27816
Married (Not Separated)	18222	15342	17514	51078
Separated, Divorced, Widowed or Bereaved Civil Union Partner	5811	6738	5988	18537
Not Elsewhere Included	2214	2046	2601	6861
Total	35016	34650	34626	104292

Table 92 Social Marital Status of NMDHB Residents (aged 15+), 2006

	Tasman District	Nelson City	Marlborough District	NMDHB
Partnered, Not Further Defined	423	450	489	1362
Spouse	17949	15042	17211	50202
Other Partnership	4323	4638	4182	13143
Non-Partnered, Not Further Defined	690	816	789	2295
Non-Partnered, Never Married and Never Joined in a Civil Union	5787	7128	5622	18537
Non-Partnered, Separated	816	1005	807	2628
Non-Partnered, Divorced	1413	2025	1392	4830
Non-Partnered, Widowed or Bereaved Civil Union Partner	1743	1794	1842	5379
Not Stated	1881	1752	2289	5922
Total	35016	34647	34623	104286

1.1.10 Educational Qualifications

Table 93 Highest Qualification of NMDHB Residents (aged 15+), 2006

	Tasman District	Nelson City	Marlborough District	NMDHB
No Qualification	8583	7989	9000	25572
Level 1 Certificate Gained at School	5058	4437	4980	14475
Level 2 Certificate Gained at School	3300	3165	3027	9492
Level 3 or 4 Certificate Gained at School	1182	1326	1233	3741
Overseas Secondary School Qualification	1350	1488	1152	3990
Level 1, 2 or 3 Certificate Gained Post-school	1464	1596	1401	4461
Level 4 Certificate Gained Post-school	3984	3798	3918	11700
Level 5 Diploma	1299	1320	1122	3741
Level 6 Diploma	2106	2214	1980	6300
Bachelor Degree and Level 7 Qualifications	2418	3039	2085	7542
Post-Graduate and Honours Degree	501	663	420	1584
Masters Degree	399	501	288	1188
Doctorate Degree	120	168	90	378
Not Elsewhere Included	3258	2952	3927	10137
Total	35019	34650	34626	104295

1.1.11 Labour Force Status

Table 94 Labour Force Status of NMDHB Residents (aged 15+), 2006

	Tasman District	Nelson City	Marlborough District	NMDHB
Employed Full Time	17355	16383	17613	51351
Employed Part Time	5958	5643	5118	16719
Unemployed	591	969	582	2142
Not in the Labour Force	10152	10986	10164	31302
Work and Labour Force Status Unidentifiable	963	669	1149	2781
Total	35016	34650	34626	104292

1.1.12 Occupation Type

Table 95 Occupation Type of Employed NMDHB Residents (aged 15+), 2006

	Tasman District	Nelson City	Marlborough District	NMDHB
Managers	4437	3042	4206	11685
Professionals	3117	4245	2925	10287
Technicians and Trades Workers	2775	2760	2946	8481
Community and Personal Service Workers	1734	1902	1791	5427
Clerical and Administrative Workers	2229	2538	2214	6981
Sales Workers	1827	2022	1737	5586
Machinery Operators and Drivers	1425	1230	1269	3924
Labourers	4587	3261	4491	12339
Not Elsewhere Included	1182	1020	1152	3354
Total	23313	22023	22731	68067

1.1.13 Personal Income Level

Table 96 Personal Income Level of NMDHB Residents (aged 15+), 2006

	Tasman	Nelson	Marlborough	NMDHB
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	District	City	District	
Loss	333	144	240	717
Zero Income	1065	1074	861	3000
\$1 - \$5,000	2607	2385	2148	7140
\$5,001 - \$10,000	2652	2307	2379	7338
\$10,001 - \$15,000	4887	4803	4599	14289
\$15,001 - \$20,000	3636	3483	3498	10617
\$20,001 - \$25,000	2958	2943	2970	8871
\$25,001 - \$30,000	2727	2796	2871	8394
\$30,001 - \$35,000	2298	2526	2451	7275
\$35,001 - \$40,000	2259	2250	2220	6729
\$40,001 - \$50,000	2613	2820	2781	8214
\$50,001 - \$70,000	2553	2739	2661	7953
\$70,001 - \$100,000	936	984	942	2862
\$100,001 or More	687	807	795	2289
Not Stated	2802	2586	3210	8598
Total	35019	34650	34626	104295

1.1.14 Family Type

Table 97 Family Type for Private Occupied Dwellings, NMDHB Residents, 2006

	Tasman District	Nelson City	Marlborough District	NMDHB
Couple Without Children	5676	5223	5958	16857
Couple With Child(ren)	5253	4371	4389	14013
One Parent With Child(ren)	1650	2172	1503	5325
Total	12579	11760	11850	36189

1.1.15 Household Composition

Table 98 Household Composition for Households in Private Occupied Dwellings, NMDHB Residents, 2006

	Tasman District	Nelson City	Marlborough District	NMDHB
One-Family Household (With or Without Other People)	12060	11325	11373	34758
Two-Family Household (With or Without Other People)	255	210	228	693
Three- or More Family Household (With or Without Other People)	3	3	6	12
Other Multiperson Household	462	870	576	1908
One-Person Household	3792	4344	3933	12069
Household Composition Unidentifiable	228	162	318	708
Total	16800	16920	16437	50157

1.1.16 Access to Telecommunication Systems

Table 99 Access to Telecommunication Systems for Households in Private Occupied Dwellings, NMDHB Residents, 2006

	Tasman District	Nelson City	Marlborough District	NMDHB
Access to a Cellphone/Mobile Phone	11343	11859	11415	34617

	Tasman District	Nelson City	Marlborough District	NMDHB
Access to a Telephone	14889	15213	14478	44580
Access to a Fax Machine	5061	3873	4707	13641
Access to the Internet	9657	9939	9180	28776
No Access to Telecommunication systems	363	276	261	900
Total	16290	16497	15771	48558

1.1.17 Access to Motor Vehicles

Table 100 Access to Motor Vehicles for Households in Private Occupied Dwellings, NMDHB Residents, 2006

	Tasman District	Nelson City	Marlborough District	NMDHB
No Motor Vehicle	804	1302	990	3096
One Motor Vehicle	5529	6999	5655	18183
Two Motor Vehicles	6888	5961	6339	19188
Three or More Motor Vehicles	3084	2235	2778	8097
Not Elsewhere Included	504	429	678	1611
Total	16803	16920	16437	50160

1.1.18 Tenure of Households

Table 101 Tenure of Household for Households in Private Occupied Dwellings, NMDHB Residents, 2006

	Tasman District	Nelson City	Marlborough District	NMDHB
Dwelling Owned or Partly Owned by Usual Resident(s)	10002	9282	9276	28560
Dwelling Held in a Family Trust by Usual Resident(s)	2085	1806	1893	5784
Dwelling Not Owned by Usual Resident(s)	3864	5070	4233	13167
Not Elsewhere Included	849	762	1035	2646
Total	16803	16920	16437	50160

Table 102 Number of Dwellings and Mean Population per Dwelling, NMDHB, 2006 Census

	Total Occupied Dwellings	Usually Resident Population	Mean Population per Dwelling
Tasman District	17,268	44,625	2.6
Nelson City	17,187	42,891	2.5
Marlborough District	16,842	42,549	2.5
NMDHB	51,297	130,065	2.5
New Zealand	1471746	4,027,947	2.7

Table 103 Usually Resident Population and Census Night Population, NMDHB, 2006 Census

	Usually Resident Population	Census Night Population	Additional Population on Census Night
Tasman District	44,625	48,309	3,684
Nelson City	42,891	45,372	2,481
Marlborough District	42,549	45,972	3,423
NMDHB	130,065	139,653	9,588
New Zealand	4,027,947	4,143,282	115,335

1.1.19 NZDep2006 Average Score and Decile for Census Area Units

Table 104 NZDep2006: NMDHB Average Score and Decile for Census Area Units

CAU Name	Average NZDep2006 Decile for CAU	Average NZDep2006 Score for CAU	Population
Isel Park	9	1067	2766
Toi Toi	9	1064	1596
Tapawera	9	1060	405
Broads	9	1055	1560
Washington	8	1051	2772
Tahunanui	8	1049	2001
Mayfield	8	1039	2694
Rabbit Island	8	1036	6
The Wood	8	1033	2823
Motueka West	8	1029	3414
Jackett Island	8	1029	3
Blenheim Central	8	1025	2736
Kirks	8	1025	795
Nelson Airport	8	1025	843
Grampians	8	1024	2034
Takaka	7	1012	1149
Seddon	7	1011	510
Motueka East	7	1009	3708
Picton	7	1005	2928
Trafalgar	7	1000	405
Maitai	7	1000	597
Whitney	7	998	4161
Nayland	6	996	735
Murchison	6	995	501
Port Nelson	6	992	99
Inlet-Tasman Bay	6	992	3
Redwoodtown	6	987	5151
The Brook	6	987	1164
Golden Bay	6	981	3678
Lake Rotoroa	6	981	603
Langbein	6	981	3192
Golden Downs	6	977	912
Motueka Outer	6	976	3813
Maitlands	5	974	2385
Havelock	5	969	489
Bronte	5	967	1713
Riwaka	5	963	852
Marlborough Sounds Terrestrial	5	962	3408
Kaiteriteri	5	962	735
Richmond East	5	961	5727
Atmore	5	959	1215
Severn	4	957	6
Waikawa	4	952	1155
Enner Glynn	4	952	3075
Spring Creek-Riverlands	4	949	1620
Woodbourne	4	948	675
Best Island	4	947	84
Richmond West	4	947	5985

CAU Name	Average NZDep2006 Decile for CAU	Average NZDep2006 Score for CAU	Population
Waimea Inlet West	4	946	6
Marlborough Sounds Coastal Marine	4	945	48
Springlands	4	945	3807
Whangamoa	3	941	867
Saxton Island	3	940	0
Mapua	3	940	1878
Tahuna Hills	3	940	2127
Ranzau	3	937	729
Saxton	3	936	1698
Britannia	3	936	1338
Wakefield	3	935	1875
Renwick	3	934	1875
Hope	3	934	1191
Witherlea	3	933	4542
Atawhai	3	933	2208
Ward	3	932	903
Wai-iti	2	928	4887
Glenduan	2	924	447
Ngawhatu	2	920	1344
Wairau	2	919	4572
Brightwater	2	914	1791
Clifton	2	914	1086
Omaka	1	910	1269
Richmond Hill	1	893	57
Aniseed Hill	1	886	624
Waimea Inlet East	0	0	0
Bell Island	0	0	0
Inlet-Motueka	0	0	0
Moutere Inlet	0	0	0
Oceanic-Tasman Region	0	0	0
Oceanic-Nelson Region	0	0	0
Oceanic-Marlborough Region	0	0	9
Inlet-Ligar Bay	0	0	0

Table 105 Main Causes of Death, NMDHB Residents 2003-2007

Description	ICD 10 Code	2003	2004	2005	2006	2007	Grand Total
Acute myocardial infarction	I21	115	151	118	121	116	621
Chronic ischaemic heart disease	I25	87	107	97	116	85	492
Other chronic obstructive pulmonary disease	J44	56	58	58	44	50	266
Malignant neoplasm of bronchus and lung	C34	51	51	50	50	46	248
Stroke, not specified as haemorrhage or infarction	I64	44	50	44	57	48	243
Malignant neoplasm of colon	C18	40	29	31	33	29	162
Malignant neoplasm of breast	C50	19	23	28	26	27	123
Unspecified dementia	F03	23	30	28	20	22	123
Pneumonia, organism unspecified	J18	22	19	27	21	27	116
Malignant neoplasm of prostate	C61	17	25	23	19	22	106
Type 2 diabetes mellitus	E11	16	17	27	24	21	105
Alzheimer's disease	G30	11	22	27	20	12	92
Aortic aneurysm and dissection	I71	7	23	21	23	15	89
Cerebral infarction	I63	21	13	15	14	13	76
Nonrheumatic aortic valve disorders	I35	11	17	22	14	11	75
Heart failure	I50	15	11	19	10	17	72
Malignant melanoma of skin	C43	6	13	12	14	22	67
Malignant neoplasm of pancreas	C25	8	14	15	13	17	67
Malignant neoplasm without specification of site	C80	11	11	15	16	11	64
Sequelae of cerebrovascular disease	I69	11	11	16	11	10	59
Malignant neoplasm of rectum	C20	18	11	9	6	13	57
Intracerebral haemorrhage	I61	7	10	5	15	16	53
Malignant neoplasm of stomach	C16	15	11	5	9	6	46
Malignant neoplasm of bladder	C67	9	10	10	8	7	44
Malignant neoplasm of oesophagus	C15	10	8	5	8	10	41
Malignant neoplasm of brain	C71	8	12	7	6	7	40
Atrial fibrillation and flutter	I48	9	9	6	8	5	37
Other cerebrovascular diseases	I67	9	5	4	10	9	37
Intentional self-harm by hanging, strangulation and suffocation	X70	4	4	11	9	9	37
Multiple myeloma and malignant plasma cell neoplasms	C90	8	10	10	2	4	34
Malignant neoplasm of ovary	C56	6	9	5	5	9	34
Parkinson's disease	G20	2	8	7	9	7	33
Malignant neoplasm of kidney, except renal pelvis	C64	7	9	4	7	6	33
Chronic renal failure	N18	5	5	3	6	12	31
Other malignant neoplasms of skin	C44	6	2	10	4	8	30
Subarachnoid haemorrhage	I60	6	7	6	4	7	30
Vascular dementia	F01	1	9	6	7	6	29
Atherosclerosis	I70	5	3	6	6	8	28
Spinal muscular atrophy and related syndromes	G12	4	4	5	9	5	27
Diffuse non-Hodgkin lymphoma	C83	8	5	3	7	4	27
Myeloid leukaemia	C92	6	8	3	5	4	26
Malignant neoplasm of other and ill-defined digestive organs	C26	4	1	7	6	8	26
Malignant neoplasm of liver and intrahepatic bile ducts	C22	3	4	2	10	4	23
Lymphoid leukaemia	C91	2	4	6	5	5	22
Paralytic ileus and intestinal obstruction without hernia	K56	7	5	3	4	3	22
Intentional self-poisoning by and exposure to other gases and vapours	X67	1	3	4	6	7	21

16.5 Main Causes of Hospitalisation by Age by ICD10 codes, NMDHB Residents, 2009

1.1.20 0-14 Years

By ICD10 code

Table 106 Main Causes of Hospitalisation 0-14 Years by ICD10 code

ICD10 code description	ICD10 code	%	Discharges
Singleton, born in hospital	Z380	27.73%	1,204
Dental caries, unspecified	K029	3.16%	137
Asthma, unspecified	J459	2.19%	95
Acute upper respiratory infection, unspecified	J069	2.10%	91
Other preterm infant, 32 or more completed weeks but less than 37 completed weeks	P0732	1.93%	84
Acute bronchiolitis, unspecified	J219	1.64%	71
Viral infection, unspecified	B349	1.52%	66
Nonsuppurative otitis media, unspecified	H659	1.52%	66
Periapical abscess without sinus	K047	1.29%	56

By Subgroup

Table 107 Main Causes of Hospitalisation 0-14 Years by Subgroup

subgroup	%	Discharges
Z30–Z39 Persons encountering health services in circumstances related to reproduction	28.19%	1,224
K00–K14 Diseases of oral cavity, salivary glands and jaws	6.36%	276
H65–H75 Diseases of middle ear and mastoid	4.33%	188
J00–J06 Acute upper respiratory infections	3.80%	165
P05–P08 Disorders related to length of gestation and fetal growth	3.48%	151
J20–J22 Other acute lower respiratory infections	2.72%	118
J40–J47 Chronic lower respiratory diseases	2.42%	105
J30–J39 Other diseases of upper respiratory tract	2.33%	101
S00–S09 Injuries to the head	1.93%	84
R50–R69 General symptoms and signs	1.84%	80
J10–J18 Influenza and pneumonia	1.80%	78
Z40–Z54 Persons encountering health services for specific procedures and health care	1.73%	75
B25–B34 Other viral diseases	1.66%	72
P20–P29 Respiratory and cardiovascular disorders specific to the perinatal period	1.57%	68

1.1.21 15-24 Years

By ICD10 code

Table 108 Main Causes of Hospitalisation 15-24 Years by ICD10 code

ICD10 code description	ICD10 code	%	Discharges
Medical abortion, complete or unspecified, without complication	O049	9.9%	254
Single spontaneous delivery	O80	3.4%	86
First degree perineal laceration during delivery	O700	1.8%	45
Other and unspecified abdominal pain	R104	1.5%	39
Acute appendicitis, unspecified	K359	1.4%	37
Pain localised to other parts of lower abdomen	R103	1.3%	33
Chronic tonsillitis	J350	1.2%	31
Second degree perineal laceration during delivery	O701	1.1%	28
Aplastic anaemia, unspecified	D619	1.1%	28
Other specified diseases and conditions complicating pregnancy, childbirth and the puerperium	O998	1.1%	28
Fracture of nasal bones	S022	1.1%	27
Prolonged pregnancy	O48	1.0%	25

By Subgroup

Table 109 Main Causes of Hospitalisation 15-24 Years by Subgroup

subgroup	%	Discharges
O00–O08 Pregnancy with abortive outcome	12.5%	321
O60–O75 Complications of labour and delivery	8.0%	204
S00–S09 Injuries to the head	4.5%	116
R10–R19 Symptoms and signs involving the digestive system and abdomen	4.5%	115
O30–O48 Maternal care related to the fetus and amniotic cavity and possible delivery problems	4.2%	107
O80–O82 Delivery	3.4%	86
N80–N98 Noninflammatory disorders of female genital tract	3.0%	77
J30–J39 Other diseases of upper respiratory tract	3.0%	76
K00–K14 Diseases of oral cavity, salivary glands and jaws	2.5%	65
T36–T50 Poisoning by drugs, medicaments and biological substances	2.5%	64
L00–L08 Infections of the skin and subcutaneous tissue	2.3%	59
S60–S69 Injuries to the wrist and hand	2.1%	55
K35–K38 Diseases of appendix	2.1%	54
T80–T88 Complications of surgical and medical care, not elsewhere classified	2.0%	50

1.1.22 25-44 Years

By ICD10 code

Table 110 Main Causes of Hospitalisation 25-44 Years by ICD10 code

ICD10 code description	ICD10 code	%	Discharges
Medical abortion, complete or unspecified, without complication	O049	3.9%	214
Single spontaneous delivery	O80	3.8%	206
Maternal care due to uterine scar from previous surgery	O342	2.2%	123
Second degree perineal laceration during delivery	O701	2.1%	114
First degree perineal laceration during delivery	O700	1.8%	100
Sterilisation	Z302	1.5%	80
Prolonged pregnancy	O48	1.3%	73
Missed abortion	O021	1.2%	64
Other and unspecified abdominal pain	R104	1.1%	60
Excessive and frequent menstruation with regular cycle	N920	1.0%	56
Chest pain, unspecified	R074	1.0%	54
Premature rupture of membranes, onset of labour within 24 hours	O420	1.0%	54

By subgroup

Table 111 Main Causes of Hospitalisation 25-44 Years by Subgroup

subgroup	%	Discharges
O60–O75 Complications of labour and delivery	9.9%	539
O30–O48 Maternal care related to the fetus and amniotic cavity and possible delivery problems	8.0%	437
O00–O08 Pregnancy with abortive outcome	7.0%	382
N80–N98 Noninflammatory disorders of female genital tract	5.5%	302
O80–O82 Delivery	3.8%	209
R10–R19 Symptoms and signs involving the digestive system and abdomen	3.1%	172
Z30–Z39 Persons encountering health services in circumstances related to reproduction	2.1%	115
S80–S89 Injuries to the knee and lower leg	2.0%	111
M20–M25 Other joint disorders	2.0%	110

1.1.23 45-64 Years

By ICD10 code

Table 112 Main Causes of Hospitalisation 45-64 Years by ICD10 code

ICD10 code description	ICD10 code	%	Discharges
Chest pain, unspecified	R074	3.8%	253

ICD10 code description	ICD10 code	%	Discharges
Atrial fibrillation and flutter	I48	1.8%	118
Unstable angina	I200	1.3%	89
Acute subendocardial myocardial infarction	I214	1.3%	84
Angina pectoris, unspecified	I209	1.2%	81
Malignant neoplasm of skin of other and unspecified parts of face	C443	1.0%	69
Calculus of gallbladder with other cholecystitis, without mention of obstruction	K8010	1.0%	67
Unilateral or unspecified inguinal hernia, without obstruction or gangrene, not specified as recurrent	K4090	1.0%	66
Other primary coxarthrosis	M161	1.0%	65

By Subgroup

Table 113 Causes of Hospitalisation 45-64 Years by Subgroup

subgroup	%	Discharges
I20–I25 Ischaemic heart diseases	5.5%	366
R00–R09 Symptoms and signs involving the circulatory and respiratory systems	5.2%	347
Z40–Z54 Persons encountering health services for specific procedures and health care	4.0%	265
I30–I52 Other forms of heart disease	3.5%	231
N80–N98 Noninflammatory disorders of female genital tract	3.2%	211
R10–R19 Symptoms and signs involving the digestive system and abdomen	2.7%	183
M20–M25 Other joint disorders	2.7%	178
K80–K87 Disorders of gallbladder, biliary tract and pancreas	2.6%	172
C43–C44 Melanoma and other malignant neoplasms of skin	2.6%	170
M15–M19 Arthrosis	2.5%	166
T80–T88 Complications of surgical and medical care, not elsewhere classified	2.4%	158
K40–K46 Hernia	2.3%	156
D10–D36 Benign neoplasms	2.1%	141
K55–K63 Other diseases of intestines	2.1%	140

1.1.24 65-74 Years

By ICD10 code

Table 114 Causes of Hospitalisation 65-74 Years by ICD10 code

ICD10 code description	ICD10 code	%	Discharges
Chest pain, unspecified	R074	2.5%	99
Atrial fibrillation and flutter	I48	2.2%	89

ICD10 code description	ICD10 code	%	Discharges
Cataract, unspecified	H269	2.1%	82
Malignant neoplasm of skin of other and unspecified parts of face	C443	1.9%	74
Care involving use of rehabilitation procedure, unspecified	Z509	1.7%	68
Acute subendocardial myocardial infarction	I214	1.7%	68
Other primary coxarthrosis	M161	1.7%	67
Other primary gonarthrosis	M171	1.6%	62
Angina pectoris, unspecified	I209	1.5%	60
Unstable angina	I200	1.4%	56
Chronic obstructive pulmonary disease with acute lower respiratory infection	J440	1.3%	52
Malignant neoplasm of prostate	C61	1.3%	52
Fitting and adjustment of urinary device	Z466	1.2%	47
Atherosclerotic heart disease, of native coronary artery	I2511	1.0%	41

By Subgroup

Table 115 Causes of Hospitalisation 65-74 Years by Subgroup

subgroup	%	Discharges
I20–I25 Ischaemic heart diseases	6.8%	272
Z40–Z54 Persons encountering health services for specific procedures and health care	5.8%	230
I30–I52 Other forms of heart disease	4.9%	195
C43–C44 Melanoma and other malignant neoplasms of skin	4.3%	169
M15–M19 Arthrosis	4.2%	165
R00–R09 Symptoms and signs involving the circulatory and respiratory systems	4.0%	160
T80–T88 Complications of surgical and medical care, not elsewhere classified	2.7%	109
E09–E14 Impaired glucose regulation and diabetes mellitus	2.5%	99
J40–J47 Chronic lower respiratory diseases	2.5%	99
K55–K63 Other diseases of intestines	2.4%	94
H25–H28 Disorders of lens	2.3%	93
K80–K87 Disorders of gallbladder, biliary tract and pancreas	2.2%	88

1.1.25 75-84 Years

By ICD10 code

Table 116 Causes of Hospitalisation 75-84 Years by ICD10 code

ICD10 code description	ICD10 code	%	Discharges
Care involving use of rehabilitation procedure, unspecified	Z509	5.4%	232
Degeneration of macula and posterior	H353	3.6%	154

ICD10 code description	ICD10 code	%	Discharges
pole			
Cataract, unspecified	H269	3.5%	152
Atrial fibrillation and flutter	I48	2.4%	105
Chest pain, unspecified	R074	1.8%	79
Pneumonia, unspecified	J189	1.8%	79
Acute subendocardial myocardial infarction	I214	1.8%	78
Malignant neoplasm of skin of other and unspecified parts of face	C443	1.6%	68
Other primary coxarthrosis	M161	1.4%	61
Unstable angina	I200	1.3%	56
Congestive heart failure	I500	1.2%	52
Angina pectoris, unspecified	I209	1.2%	52
Urinary tract infection, site not specified	N390	1.0%	44
Chronic obstructive pulmonary disease with acute lower respiratory infection	J440	1.0%	42

By subgroup

Table 117 Causes of Hospitalisation 75-84 Years by Subgroup

subgroup	%	Discharges
Z40–Z54 Persons encountering health services for specific procedures and health care	8.2%	351
I30–I52 Other forms of heart disease	5.9%	253
I20–I25 Ischaemic heart diseases	5.8%	247
H30–H36 Disorders of choroid and retina	4.8%	205
C43–C44 Melanoma and other malignant neoplasms of skin	4.3%	185
H25–H28 Disorders of lens	3.9%	168
R00–R09 Symptoms and signs involving the circulatory and respiratory systems	3.6%	155
M15–M19 Arthrosis	2.6%	113
K55–K63 Other diseases of intestines	2.6%	113
I60–I69 Cerebrovascular diseases	2.3%	100
J40–J47 Chronic lower respiratory diseases	2.2%	95
J10–J18 Influenza and pneumonia	2.0%	87

1.1.26 85 years or more

By ICD10 Code

Table 118 Causes of Hospitalisation 85+ Years by ICD10 Code

ICD10 code description	ICD10 code	%	Discharges
Care involving use of rehabilitation procedure, unspecified	Z509	10.9%	240
Degeneration of macula and posterior pole	H353	5.1%	113

ICD10 code description	ICD10 code	%	Discharges
Congestive heart failure	I500	2.7%	60
Pneumonia, unspecified	J189	2.7%	60
Cataract, unspecified	H269	2.6%	58
Urinary tract infection, site not specified	N390	2.2%	49
Stroke, not specified as haemorrhage or infarction	I64	1.8%	39
Atrial fibrillation and flutter	I48	1.7%	38
Syncope and collapse	R55	1.6%	35
Fracture of subcapital section of femur	S7203	1.2%	27
Acute subendocardial myocardial infarction	I214	1.2%	27
Fracture of intertrochanteric section of femur	S7211	1.2%	26
Noninfective gastroenteritis and colitis, unspecified	K529	1.1%	24
Malignant neoplasm of skin of other and unspecified parts of face	C443	1.0%	23
Chest pain, unspecified	R074	1.0%	21

By Subgroup

Table 119 Causes of Hospitalisation 85+ Years by Subgroup

subgroup		Discharges
Z40–Z54 Persons encountering health services for specific procedures and health care	12.0%	264
I30–I52 Other forms of heart disease	6.8%	149
H30–H36 Disorders of choroid and retina	6.3%	139
S70–S79 Injuries to the hip and thigh	4.4%	96
I20–I25 Ischaemic heart diseases	3.8%	83
C43–C44 Melanoma and other malignant neoplasms of skin	3.7%	81
J10–J18 Influenza and pneumonia	3.1%	69
I60–I69 Cerebrovascular diseases	2.9%	64
H25–H28 Disorders of lens	2.9%	63
R00–R09 Symptoms and signs involving the circulatory and respiratory systems	2.8%	62
N30–N39 Other diseases of urinary system	2.4%	52
R50–R69 General symptoms and signs	2.3%	51
E09–E14 Impaired glucose regulation and diabetes mellitus	2.3%	51
K55–K63 Other diseases of intestines	2.1%	46

16.6 Health Indicators from “An indication of New Zealanders Health” (Ministry of Health, 2007) – Age-standardised rates (unless otherwise noted)

Table 120 Health Indicators from “An indication of New Zealanders Health

	All New Zealand	Nelson Marlborough
1. Reducing smoking		
Daily cigarette smoker (self-reported), 14–15 years, age-specific percent, 2005	9.0	10.3
Daily cigarette smoker (self-reported), 15+ years, percent, 2006	21.9 (21.7–21.9)	22.2 (21.9–22.5)
2. Improving nutrition		
3+ servings of vegetables per day (self-reported), 15+ years, percent, 2002/03	67.3 (65.6–69.1)	65.0 (62.4–67.6)
2+ servings of fruit per day (self-reported), 15+ years, percent, 2002/03	53.9 (52.4–55.3)	57.9 (55.0–60.9)
3. Reducing obesity		
Overweight, 15+ years, percent, 2002/03	34.0 (32.6–35.3)	33.8 (31.0–36.6)
Obesity, 15+ years, percent, 2002/03	20.1 (19.0–21.2)	17.8 (15.6–20.1)
4. Increasing the level of physical activity		
Physically active (self-reported), 15+ years, percent, 2002/03	74.0 (72.5–75.5)	74.2 (71.5–76.8)
Regularly physically active (self-reported), 15+ years, percent, 2002/03	52.5 (51.0–54.0)	51.4 (48.7–54.1)
5. Reducing the rates of suicide and suicide attempts		
Intentional self-harm hospitalisations, 5+ years, rate per 100,000, 2004–05	139.9 (137.1–142.7)	131.2 (116.6–147.1)
Suicide mortality, 5+ years, rate per 100,000, 2003–04	13.1 (12.3–14.0)	7.9 (4.9–11.9)
Suicide attempt (self-reported), 16+ years, crude percent, 2003/04	0.4 (0.3–0.6)	
6. Minimising harm caused by alcohol and illicit drugs and other drug use to individuals and communities		
Potentially hazardous drinking pattern (self-reported), 15+ years, percent, 2002/03	18.9 (17.6–20.3)	18.5 (16.1–20.9)
Marijuana use in last 12 months (at least monthly, self-reported), 15+ years, percent, 2002/03	7.4 (6.5–8.2)	7.4 (6.0–8.9)
7. Reducing the incidence and impact of cancer		
All cancer registrations, rate per 100,000, 2003–04	337.3 (333.8–340.8)	343.0 (325.3–361.4)
All cancer mortality, rate per 100,000, 2002–03	131.4 (129.3–133.5)	136.6 (126.0–147.9)
Lung cancer registrations, rate per 100,000, 2003–04	31.9 (30.9–33.0)	28.0 (23.2–33.5)
Lung cancer mortality, rate per 100,000, 2002–03	25.1 (24.2–26.1)	24.7 (20.2–29.9)
Female breast cancer registrations, rate per 100,000, 2003–04	86.4 (84.0–88.9)	98.7 (85.3–113.6)
Female breast cancer mortality, rate per 100,000, 2002–03	21.4 (20.3–22.7)	16.3 (11.4–22.5)
Cervical cancer registrations, rate per 100,000, 2003–04	6.9 (6.2–7.7)	8.3 (4.4–14.2)
Cervical cancer mortality, rate per 100,000, 2002–03	2.1 (1.7–2.5)	–

	All New Zealand	Nelson Marlborough
Prostate cancer registrations, rate per 100,000, 2003–04	103.8 (101.1–106.7)	108.4 (94.5–123.7)
Prostate cancer mortality, rate per 100,000, 2002–03	20.0 (18.9–21.2)	20.9 (15.4–27.8)
Colorectal cancer registrations, rate per 100,000, 2003–04	47.0 (45.8–48.3)	42.1 (36.3–48.6)
Colorectal cancer mortality, rate per 100,000, 2002–03	18.4 (17.7–19.2)	26.2 (21.6–31.4)
Melanoma registrations, rate per 100,000, 2003–04	36.4 (35.3–37.6)	41.3 (35.0–48.4)
Melanoma mortality, rate per 100,000, 2002–03	4.5 (4.1–4.9)	4.6 (2.7–7.2)
8. Reducing the incidence and impact of cardiovascular disease		
Heart disease prevalence (self-reported), 15+ years, percent, 2002/03	9.0 (8.3–9.7)	8.1 (7.0–9.2)
All cardiovascular disease mortality, rate per 100,000, 2002–03	157.9 (155.9–160.0)	146.0 (136.1–156.4)
Ischaemic heart disease mortality, rate per 100,000, 2002–03	89.1 (87.6–90.7)	81.7 (74.3–89.7)
Stroke mortality, rate per 100,000, 2002–03	37.0 (36.0–38.0)	34.9 (30.3–40.1)
High blood pressure (self-reported), 15+ years, percent, 2002/03	18.7 (17.8–19.5)	18.6 (16.9–20.3)
High blood cholesterol (self-reported), 15+ years, percent, 2002/03	13.7 (13.0–14.4)	13.9 (12.7–15.2)
9. Reducing the incidence and impact of diabetes		
Diabetes prevalence (self-reported), 15+ years, percent, 2002/03	4.1 (3.6–4.6)	3.2 (2.3–4.1)
Diabetes complications – renal failure hospitalisations, rate per 100,000, 2004–05	14.0 (13.3–14.7)	4.4 (2.6–7.1)
Diabetes complications – lower limb amputation hospitalisations, rate per 100,000, 2004–05	9.0 (8.4–9.5)	9.0 (6.3–12.3)
10. Improving oral health		
Caries-free teeth (fluoridated supply), school Year 8, age-specific percent, 2004	50.7 (50.1–51.3)	n/f
Caries-free teeth (non-fluoridated supply), school Year 8, age-specific percent, 2004	40.4 (39.8–41.0)	49.3 (47.0–51.5)
Mean number decayed, missing or filled teeth (fluoridated supply), school Year 8, age-specific, 2004	1.3	n/f
Mean number decayed, missing or filled teeth (non-fluoridated supply), school Year 8, age-specific, 2004	1.8	1.3
11. Reducing violence in interpersonal relationships, families, schools and communities		
Assault and homicide mortality, rate per 100,000, 2002–03	1.6 (1.3–1.9)	1.8 (0.6–4.3)
12. Improving the health status of people with severe mental illness		
Serious mental disorders (self-reported), 15+ years, percent, 2002/03	2.6 (2.2–3.1)	3.5 (2.5–4.6)
Any serious mental disorder, 16+ years, crude percent, 2003/04	4.7 (4.2–5.2)	
	All New Zealand	Nelson Marlborough
13. Ensuring access to appropriate		

	All New Zealand	Nelson Marlborough
child health care services including well child and family health care and immunisation		
Infant mortality, rate per 1000 live births, 2002–03	5.5 (5.1–6.0)	6.4 (3.9–10.0)
Perinatal mortality, rate per 1000 total births, 2002–03	9.7 (9.2–10.3)	9.7 (6.5–14.0)
Breastfeeding (exclusive and full), at three months, age-specific percent, 2005	55.5 (55.1–56.0)	58.0 (55.1–60.9)
Breastfeeding (exclusive and full), at six months, age-specific percent, 2005	24.8 (24.4–25.2)	29.2 (26.6–31.9)
Fully immunised coverage at two years, age-specific percent, 2005	77.4 (75.3–79.5)	80.7 (63.2–98.3)
Drowning mortality, 0–4 years, age-specific rate per 100,000, 2002–03	3.6 (2.3–5.6)	–
Burns hospitalisations, 0–4 years, age-specific rate per 100,000, 2004–05	106.8 (98.4–115.6)	–
Falls hospitalisations, 0–4 years, age-specific rate per 100,000, 2004–05	531.4 (512.6–550.7)	166.4 (109.7–242.2)
Poisonings hospitalisations, 0–4 years, age-specific rate per 100,000, 2004–05	167.0 (156.6–178.0)	80.1 (42.7–137.0)
Additional indicator: Avoidable mortality and morbidity		
Avoidable mortality, 0–74 years, rate per 100,000, 2002–03	180.3 (177.5–183.0)	164.4 (150.9–178.9)
Avoidable hospitalisations, 0–74 years, rate per 100,000, 2004–05	3423.0 (3402.5–3435.9)	2990.7 (2924.9–3057.6)
Additional indicator: Infectious disease		
Infectious disease mortality, rate per 100,000, 2002–03	11.8 (11.3–12.4)	13.4 (10.6–16.8)
Tuberculosis notifications, rate per 100,000, 2004–05	8.7 (8.0–9.3)	3.0 (1.4–5.7)
Meningococcal disease notifications, rate per 100,000, 2004–05	8.0 (7.4–8.7)	5.2 (2.5–9.6)
Hepatitis B notifications, rate per 100,000, 2004–05	1.2 (1.0–1.5)	–
Rheumatic fever (initial attack) notifications, rate per 100,000, 2004–05	1.8 (1.5–2.2)	–
Campylobacteriosis notifications, rate per 100,000, 2004–05	320.1 (316.2–324.0)	251.6 (232.6–271.9)
Cryptosporidiosis notifications, rate per 100,000, 2004–05	21.4 (20.3–22.5)	24.1 (17.8–31.9)
Giardiasis notifications, rate per 100,000, 2004–05	34.4 (33.1–35.7)	31.4 (24.8–39.2)
Salmonellosis notifications, rate per 100,000, 2004–05	32.0 (30.8–33.3)	48.1 (39.6–57.8)

**Table 121 Key Results from the New Zealand Health Survey, 2006/07
Adult Estimates (%)**

	Other South Island DHBs	NZ	% of NZ rate
Ever diagnosed by a doctor with diabetes	3.4	4.2	80.3
Ever diagnosed by a doctor with stroke	1.4	1.4	100.9
Ever diagnosed by a doctor with arthritis	12.5	12.1	103.4
Ever diagnosed by a doctor with osteoporosis	2.0	2.2	90.3
Hazardous drinking pattern	21.8	19.6	111.4
Eat three or more servings of vegetables a day	70.6	62.6	112.8
Eat two or more servings of fruit a day	56.5	59.2	95.5
Regular physical activity (30 minutes a day on 5 or more of the past 7 days)	59.7	51.4	116.2
Sedentary (less than 30 minutes in past 7 days)	13.8	14.0	98.2
Obese (BMI ≥ 30)	26.6	25.4	104.7
Overweight (BMI 25-30)	32.7	35.0	93.5
Obese or overweight (BMI ≥ 25)	59.4	60.5	98.2
Currently taking medication for high blood pressure	11.0	10.9	101.3
Currently taking medication for high blood cholesterol (pills)	6.0	6.7	89.4
Self rated health as excellent or very good	60.2	61.2	98.3
Seen a GP in past 12 months	77.3	80.1	96.4
Last visit to GP in past 12 months was free	14.6	11.0	132.4
Unmet need for GP visit in past 12 months	4.1	6.8	60.3
Healthy body size	39.6	38.1	103.9
Ever diagnosed by a doctor with angina or ever been hospitalised for a heart attack	4.4	4.0	110.8
Currently taking medication for asthma	10.5	11.4	92.3
Non-smokers exposed to second-hand smoke in their home	8.6	8.0	108.2
Current smokers (more than 100 cigarettes in lifetime and currently smoke monthly or more)	23.0	21.1	109.2
Current daily smokers	22.2	19.1	116.3
Never tried smoking	28.3	35.4	79.8
High or very high probability of having an anxiety or depressive disorder (K-10 score of 12 or more)	6.8	6.8	99.9
Goes to a primary health care provider first when feeling unwell or injured	94.4	93.0	101.6
Seen an oral health care worker in past 12 months	56.9	50.0	113.8
Unmet need for oral health care in past 12 months	8.8	10.6	83.0
Never seen an oral health care worker	1.2	2.3	52.4
One or more teeth removed due to decay, abscess, infection or gum disease	44.3	43.8	101.3
Visited an emergency department at a public hospital in the past 12 months	13.6	8.5	159.5
Obese (BMI Age-appropriate equivalent to 30)	8.2	8.3	97.9

	Other South Island DHBs	NZ	% of NZ rate
3 or more fizzy drinks in the past 7 days	20.4	19.6	104.0
Ate fast food 3 or more times, in the past 7 days	5.7	7.2	79.4
Ever breastfed	82.8	87.8	94.3
Ate breakfast at home every day in the past 7 days	88.2	87.8	100.5
Usually watch 2 or more hours of TV a day	68.6	64.1	106.9
Exposed to second-hand smoke in their home	13.6	9.6	141.7
Healthy body size (BMI Age-appropriate equivalent to)	66.1	67.9	97.4
Currently taking medication for asthma	17.2	14.8	115.9
Seen a GP in past 12 months	73.3	79.2	92.6
Last visit to GP in past 12 months was free	30.3	33.3	90.8
Goes to a primary health care provider first when feeling unwell or injured	98.4	97.4	101.0
Unmet need for GP visit in past 12 months	2.2	4.0	54.1
Seen an oral health care worker in past 12 months	89.9	80.4	111.8
Never seen an oral health care worker	4.0	8.9	45.6
Unmet need for oral health care in past 12 months	5.4	3.4	157.5
Visited an emergency department at a public hospital in the past 12 months	15.2	8.2	186.4
One or more teeth removed due to decay, abscess, infection or gum disease	12.7	11.3	112.5
Never had a filling (Carries free)	40.6	50.9	79.8
Parent rated health as excellent or very good	89.6	87.2	102.8

Note: Bold text indicates that for that survey question the difference between the rate for the "Other South Island DHB" grouping and the rate for NZ was statistically significant.

**Table 122 Key Results from the New Zealand Health Survey, 2006/07
Adult Synthetic Results (%)**

	Ethnicity	NMDHB	NZ	%Narrate
Ever diagnosed by a doctor with diabetes	All	2.7	4.2	63.5
	Maori	2.9	4.6	63.5
	non-Maori	2.7	4.3	63.5
Ever diagnosed by a doctor with stroke	All	1.3	1.4	89.6
	Maori	1.4	1.5	89.6
	non-Maori	1.4	1.5	89.6
Ever diagnosed by a doctor with arthritis	All	13.3	12.1	110.0
	Maori	9.9	9.0	110.0
	non-Maori	13.9	12.6	110.0
Ever diagnosed by a doctor with osteoporosis	All	2.0	2.2	92.3
	Maori	1.0	1.1	92.3
	non-Maori	2.2	2.4	92.3
Hazardous drinking pattern	All	19.2	19.6	97.9
	Maori	35.7	36.5	97.9
	non-Maori	17.2	17.5	97.9
Eat three or more servings of vegetables a day	All	69.7	62.6	111.3
	Maori	65.6	59.0	111.3

	Ethnicity	NMDHB	NZ	%Narrate
	non-Maori	69.8	62.7	111.3
Eat two or more servings of fruit a day	All	56.6	59.2	95.6
	Maori	52.2	54.5	95.6
	non-Maori	56.6	59.2	95.6
Regular physical activity (30 minutes a day on 5 or more of the past 7 days)	All	57.4	51.4	111.7
	Maori	61.5	55.1	111.7
	non-Maori	56.7	50.8	111.7
Sedentary (less than 30 minutes in past 7 days)	All	14.1	14.0	100.1
	Maori	14.0	14.0	100.1
	non-Maori	14.4	14.4	100.1
Obese (BMI ≥ 30)	All	26.7	25.4	105.0
	Maori	41.5	39.5	105.0
	non-Maori	24.5	23.3	105.0
Overweight (BMI 25-30)	All	32.3	35.0	92.1
	Maori	28.5	31.0	92.1
	non-Maori	33.0	35.8	92.1
Obese or overweight (BMI ≥ 25)	All	58.3	60.5	96.5
	Maori	67.9	70.4	96.5
	non-Maori	57.1	59.1	96.5
Currently taking medication for high blood pressure	All	9.5	10.9	87.4
	Maori	6.8	7.7	87.4
	non-Maori	10.1	11.5	87.4
Currently taking medication for high blood cholesterol (pills)	All	3.3	6.7	48.9
	Maori	2.0	4.2	48.9
	non-Maori	3.6	7.4	48.9
Self rated health as excellent or very good	All	60.8	61.2	99.4
	Maori	51.0	51.4	99.4
	non-Maori	61.7	62.1	99.4
Seen a GP in past 12 months	All	76.5	80.1	95.5
	Maori	73.7	77.2	95.5
	non-Maori	76.9	80.5	95.5
Last visit to GP in past 12 months was free	All	12.6	11.0	114.3
	Maori	19.3	16.9	114.3
	non-Maori	11.8	10.3	114.3
Unmet need for GP visit in past 12 months	All	4.9	6.8	72.1
	Maori	8.9	12.4	72.1
	non-Maori	4.2	5.8	72.1
Healthy body size	All	40.9	38.1	107.3
	Maori	30.9	28.8	107.3
	non-Maori	42.3	39.4	107.3
Ever diagnosed by a doctor with angina or ever been hospitalised for a heart attack	All	3.9	4.0	98.9
	Maori	2.6	2.6	98.9
	non-Maori	3.2	3.2	98.9
Currently taking medication for asthma	All	9.6	11.4	84.1
	Maori	13.1	15.6	84.1
	non-Maori	9.3	11.0	84.1
Non-smokers exposed to second-hand smoke in their home	All	8.3	8.0	103.5
	Maori	18.7	18.0	103.5
	non-Maori	7.9	7.6	103.5
Current smokers (more than 100 cigarettes in lifetime and currently smoke)	All	21.9	21.1	104.0
	Maori	48.3	46.4	104.0

	Ethnicity	NMDHB	NZ	%Narrate
monthly or more)	non-Maori	19.6	18.9	104.0
Current daily smokers	All	21.1	19.1	110.2
	Maori	47.3	42.9	110.2
	non-Maori	18.8	17.0	110.2
Never tried smoking	All	29.1	35.4	82.1
	Maori	15.6	19.0	82.1
	non-Maori	30.7	37.4	82.1
High or very high probability of having an anxiety or depressive disorder (K-10 score of 12 or more)	All	7.4	6.8	109.5
	Maori	12.7	11.6	109.5
	non-Maori	6.9	6.3	109.5
Goes to a primary health care provider first when feeling unwell or injured	All	94.2	93.0	101.4
	Maori	92.2	90.9	101.4
	non-Maori	93.5	92.3	101.4
Seen an oral health care worker in past 12 months	All	56.8	50.0	113.7
	Maori	42.5	37.3	113.7
	non-Maori	57.7	50.8	113.7
Unmet need for oral health care in past 12 months	All	9.0	10.6	85.1
	Maori	16.8	19.7	85.1
	non-Maori	8.4	9.8	85.1
Never seen an oral health care worker	All	1.4	2.3	59.7
	Maori	1.1	1.9	59.7
	non-Maori	1.4	2.4	59.7
One or more teeth removed due to decay, abscess, infection or gum disease	All	43.9	43.8	100.4
	Maori	43.1	43.0	100.4
	non-Maori	39.4	39.2	100.4
Visited an emergency department at a public hospital in the past 12 months	All	12.8	8.5	149.9
	Maori	16.8	11.2	149.9
	non-Maori	12.6	8.4	149.9

Note: Bold text indicates that for that survey question the difference between the rate for NMDHB and the rate for NZ was statistically significant.

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