
West Coast District Health Board

2008 – 2021

Model of Care and Clinical Services Plan

Guiding service delivery, workforce, facility
and information technology requirements

PAPER TWO – APPENDICES

*Centre of Excellence
for Rural Health*

Prepared by:	Workstream Leaders via Jo Esplin, Acqumen
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Appendix One MoC Planning Participants and Others Consulted

	Organisation	Position	Name
Sponsors	West Coast DHB	CEO	Kevin Hague
	Ministry of Health	Deputy Director General	Anthony Hill
Steering Group	West Coast DHB	GM Corporate Services	Wayne Champion
		GM Planning and Funding	Wayne Turp
		Director of Nursing and Midwifery	Jane O'Malley
	Ministry of Health	Manager, Finance. Sector Accountability and Funding	John Hazeldine
		DHB Relations Account Manager	Lee Taylor
			Julie Patterson
			Diane Callinicos
Reference Group	West Coast DHB	Director of Nursing and Midwifery	Jane O'Malley
		GM Māori Health	Gary Coghlan
		GM Secondary Services	Chris Le Prou
		GP Liaison	Carol Atmore
		GM Mental Health, GM Community and Primary Health	Hecta Williams
		Quality and Risk Manager	Mark Bowen
		Dietician	Ruth Harvie
		Human Resources Manager	Ruth Punnett
		Planning and Funding Analyst	Tofrida Wainwright
		CMA, Head of O&G Services	Vicki Robertson
		GM Corporate Services	Wayne Champion
		GM Planning and Funding	Wayne Turp
	Ministry of Health	Manager, Finance. Sector Accountability and Funding	John Hazeldine
		DHB Relations Account Manager	Lee Taylor
		Chief Clinical Advisor	Sandy Dawson
	West Coast PHO	CEO	Andrea Baker
	Community and Public Health	Medical Officer of Health	Cheryl Brunton
South Island Shared Services Agency Ltd	GM	Robert Weir	
External Advisors	Acqumen Ltd Consulting	Director	Jo Esplin
		Director	Carmel Daly
		Associate	Chris Howard-Brown

Secondary Care Workstream			
Leader: Wayne Turp, GM Planning and Funding			
Workstream Members	West Coast DHB	GM Planning and Funding	Wayne Turp
		Planning and Funding Officer	Peter McIntosh
		GM Secondary Services	Chris Le Prou
		Nurse Manager, Clinical Services	Michele Barber
		Charge MRT	Jason Lister
		Acting CMA, Acting Head of O&G Services	Tom Fiddes
		CMA, Head of O&G Services	Vicki Robertson
		A&E Officer	Rodger Mills
Internal Consultants	West Coast DHB	Maternity Co-ordinator	Jude Bruce
		General Surgeon	Jonathan Pace
		Specialist Physician	Lasantha Martinus
		Pharmacy Manager	Nick Leach
		Laboratory Manager	Phil Clark
		General Surgeon	Ahmad Hooshiyari
		Audiologist	Garry Chapman
		Management Accountant	Christan Bahler
		Dietician	Ruth Harvie
		Manager Information Technology	Miles Roper
		Human Resources Manager	Ruth Punnett
		GM Māori Health	Gary Coghlan
		Clinical Nurse Manager	Helen Reriti
		Clinical Nurse Leader	Diane Brockbank
		Manager Buller Health	Jenny Robertson
		Oncology Resource Nurse	Maree Johnston
		Palliative Care Nurse	Bobby Davidson
		Acting Clinical Nurse Manager	Peter Watson
		Staff Nurse	Kate Honey
		Clinical Nurse Leader	Nancy Fahey
		Clinical Nurse Leader	Dot O'Connor
		Clinical Nurse Leader A&E and Outpatients	Jude Sinclair
		Clinical Nurse Manager	Julie Lucas
		HOD Occupational Therapy	Jo-Anne Gilsean
		HOD Physiotherapy	Janette Anderson
		Co-ordinator Workforce Development / Community Nurse Education	Cheryl Hutchinson
		Maternity	Anne
		HOD Social Work	Ian Newcombe
		Speech Language Therapist	Denise Diedrichs
		Facilities Manager	Wayne Burnett
		GP	Martin London
		A & E Officer	Tom Barry
		GM Corporate Services	Wayne Champion

External Consultants		Service Manager Allied Health, Diagnostics and Support Services	Raewyn McKnight
		Director of Nursing and Midwifery	Jane O'Malley
		HOD Surgery	Terry Mixter
		Acting Team Leader, IPU	Jackie Newton
		RN, IPU	Lee Marshall
		Psychiatrist	Peter Miller
	Ministry of Health	Chief Clinical Advisor	Sandy Dawson
	West Coast PHO	Chair	John Ayling
		CEO	Andrea Baker

Primary Workstream			
Leader: Andrea Baker, CEO West Coast Primary Healthcare Organisation			
Workstream Members	West Coast DHB	GP Liaison	Carol Atmore
		Planning and Funding Analyst	Shona McLeod
		Manager Buller Health	Jenny Robertson
		Nurse Manager	Maureen Frankpitt
		GM Māori Health	Gary Coghlan
		Rural Nurse	Ann Fitzwater
		Dietician	Ruth Harvie
		Planning and Funding Analyst	Tor Wainwright
		Manager Human Resources	Ruth Punnett
		GM Community and Primary Health, GM Mental Health	Hecta Williams
		GP	Martin London
		Nurse Manager, Clinical Services	Michele Barber
		Internal Advisors	West Coast DHB
CMA, Head of O&G Services	Vicki Robertson		
GM Secondary Services	Chris Le Prou		
Clinical Nurse Leader A&E and Outpatients	Jude Sinclair		
Clinical Leader Buller Medical Services, GP	Paul Cooper		
External Advisors	West Coast PHO	CEO	Andrea Baker
		Portfolio Manager	John Caygill
		Primary Mental Health	Bev Barron
		Primary Mental Health	Bryan Geer
		Clinical Co-ordinator	Fiona Doolan Noble
		Chair	John Ayling
	Ministry of Health	Senior Policy Analyst, Primary Health Care Policy, Population Health Directorate	Alison Randell
	Community and Public Health	Medical Officer of Health	Cheryl Brunton
	Westland Medical Centre	Owner, GP	Anna Dyzel
		Owner, RN	Nigel Ogilvie
	High Street Medical Centre	Owner, GP	JD Naidoo
	Community Pharmacy Representative	Community Pharmacist	Kerri Miedema
	Westland District Council	Mayor	Maureen Pugh
	Members of Greypower West Coast		

Primary Secondary Integration Workstream

Leader: Carol Atmore, GP Liaison (initially) then Andrea Baker, CEO West Coast Primary Healthcare Organisation

Workstream Members	West Coast DHB	GP Liaison	Carol Atmore		
		GM Māori Health	Gary Coghlan		
		Clinical Nurse Leader A&E and Outpatients	Jude Sinclair		
		Clinical Leader Buller Medical Services	Paul Cooper		
		GM Mental Health, GM Community and Primary Health	Hecta Williams		
		Acting CMA	Tom Fiddes		
		Nurse Manager, Clinical Services	Michele Barber		
		Planning and Funding Analyst	Shona McLeod		
		Nurse Manager	Maureen Frankpitt		
		Internal Advisors	Patient Journey Improvement Co-ordinator	Alison McDougall	
Internal Advisors	West Coast DHB	GP	Martin London		
		Manager Buller Health	Jenny Robertson		
		Clinical Nurse Leader	Heather Maw		
		Dietician	Ruth Harvie		
		Manager Information Technology	Miles Roper		
		External Advisors	West Coast PHO	CEO	Andrea Baker
				Portfolio Manger	John Caygill
Community and Public Health	Medical Officer of Health		Cheryl Brunton		

Mental Health Workstream			
Leader: Hecta Williams, General Manager Community and Primary Health, General Manager Mental Health			
Workstream Members	West Coast DHB	GM Mental Health, GM Community and Primary Health	Hecta Williams
		Team Leader TACT	Ann Smith
		Workforce Development	Ann Tacon
		District Manager Grey MHS	Anne Kerr
		District Manager Buller CMHS	Elaine Neesam
		Team Leader IPU	Donna Cameron
		Kaiarahi, Māori Mental Health	Eunice Brown
Internal Advisors		Psychiatrist	Cameron Lacey
		Quality Coordinator / Family Advisor	Judith Maloney
		PRIMHD Coordinator	Sue Brown
		Planning and Funding Analyst	Shona McLeod
		Social Worker	Guru Shanamugasundaram
		GM Planning and Funding	Wayne Turp
		Business Analyst	Katrin Geilfus
		Case Manager, Grey CMHT	Julie Wallace
		Team Leader, Westland CMHT	Nola Rochford
		External Advisors	PACT
Coast Care Trust	Manager		Roger Berwick
West Coast PHO	Brief Intervention Psychologist		Bev Barron
	Primary Mental Health Liaison		Bryan Geer
	Consumer Advisor		Jo Hall
Consumer Group Consulted	Consumer		Miriam Wylie
	Consumer		Greg Wilson
	Consumer		Vanora Dell
	Consumer		Kathleen Christians
	Consumer		Karol Dell
	Consumer		Marty Roughen
	Consumer		Thelma Tait
	Tangata Whaiora Advisor		Pauline Southorn
	Consumer	Lina Murhane	
	Consumer	Pauline Austin-Cane	
Consumer	Sharon Duncraft		
Consumer	Steve Cane		
Consumer	Shona Simmons		

Asset Management and Facility Development Workstream			
Leader: Wayne Champion, General Manager Corporate Services			
Workstream Members	West Coast DHB	GM Corporate Services	Wayne Champion
		Practice Manager	Catriona Bayliss
		GP Liaison	Carol Atmore
		GM Mental Health, GM Community and Primary Health	Hecta Williams
		GM Secondary Services	Chris Le Prou
		Acting CMA, Acting Head of O&G Services	Tom Fiddes
		Nurse Manager, Clinical Services	Michele Barber
		Charge MRT	Jason Lister
		HOD Occupational Therapy	Jo-Anne Gilsenan
		HOD Physiotherapy	Janette Anderson
		Clinical Nurse Leader A&E and Outpatients	Jude Sinclair
		Manager, Buller Health	Jenny Robertson
		Medical Records Administrator	Lynne Southon
		CNM Practice Nurse	Pauline Ainsley
		MRT	Wendy Coburn
		Public Health Nurse	Mary Lambert
		Charge Nurse	Joc Wallace
		Receptionist	Tracy Eastman
		Physiotherapist	Marie Ryan
		Social Worker	Colleen Wilson
		Clinical Nurse Associate	Trisha Loughnan
		Senior District Nurse	Margaret Prince
		Receptionist	Deb McCarthy
Maintenance Facilitator	Ally Caddie		
Immunisation Facilitator	Betty Gilsenan		
Internal Advisors	West Coast DHB	GM Māori Health	Gary Coghlan
		Finance Manager	Colin Weeks
		Human Resources Manager	Ruth Punnett
		Infection Control Advisor	Julie Ritchie
		Coordinator Workforce Development, Community Nurse Education	Cheryl Hutchinson
		Nurse Manager	Maureen Frankpitt
		HOD Social Work	Ian Newcombe
		Maternity co-ordinator	Jude Bruce
		Maternity xx	Anne xx
		Speech Language Therapist	Denise Diedrichs
		Specialist Physician	Lasantha Martinus
		Facilities Manager	Wayne Burnett
		GP	Martin London
		Planning and Funding Officer	Peter McIntosh
		Manager Information Technology	Miles Roper

		A&E Officer	Tom Barry
		GM Planning and Funding	Wayne Turp
		Service Manager Allied Health, Diagnostics and Support Services	Raewyn McKnight
		Clinical Nurse Leader	Diane Brockbank
		Director of Nursing and Midwifery	Jane O'Malley
		HOD Surgery	Terry Mixer
		General Surgeon	Jonathan Pace
		Pharmacy Manager	Nick Leach
		Nurse Manager, Clinical Services	Michele Barber
		Acting Team Leader IPU	Jackie Newton
		RN IPU	Lee Marshall
		Psychiatrist	Peter Miller
External Advisors	West Coast PHO	CEO	Andrea Baker
	Ian Krause Architects Limited	Associate	Darryl Haines
	Chow Hill Architects	Architect	Darryl Carey
	Rider Levell Bucknall Architects	Director	Neil O'Donnell

Transport and Accommodation Workstream			
Leader: Wayne Champion, General Manager Corporate Services			
Workstream Members	West Coast DHB	GM Corporate Services	Wayne Champion
		Planning and Funding Officer	Peter McIntosh
		Service Manager Allied Health, Diagnostics and Support Services	Raewyn McKnight
		Director of Nursing and Midwifery	Jane O'Malley
		Social Worker	Colleen Wilson
		Clinical Nurse Associate	Trisha Loughnan
		GM Mental Health, GM Community and Primary Health	Hecta Williams
		Manager Buller Health	Jenny Robertson
Internal Advisors		Nurse Manager	Maureen Frankpitt
		Clinical Nurse Manager	Julie Lucas
External Advisors	West Coast PHO	CEO	Andrea Baker
	Ministry of Health	Project Manager, Provider Funding, Health & Disability National Services Directorate	Kelly McAvinue
	St John	TBC	
	Canterbury DHB	TBC	
	Garden City Helicopters	TBC	

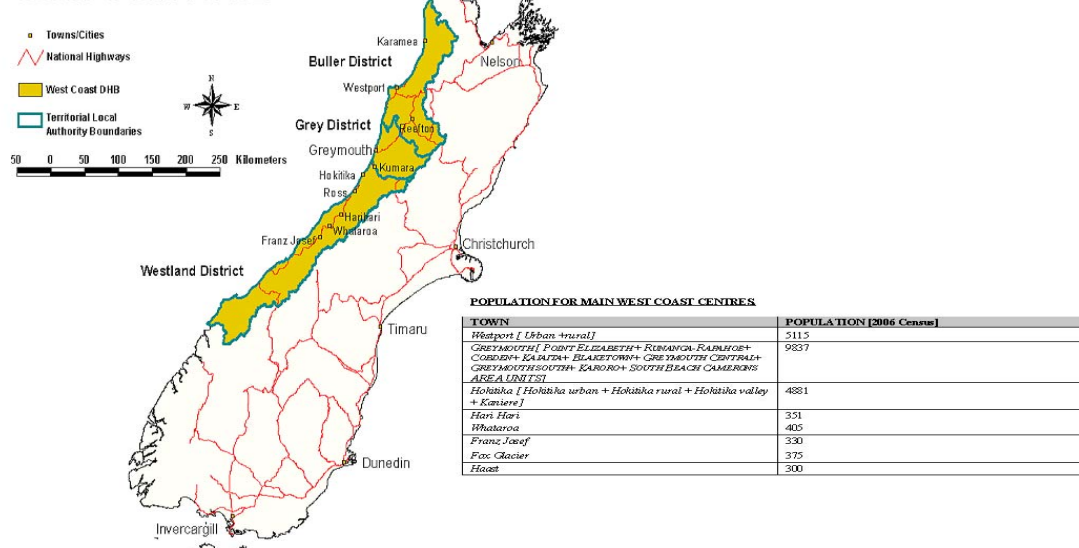
Workforce Workstream					
Leader: Ruth Punnett, Human Resources Manager					
Workstream Members	West Coast DHB	Human Resources Manager	Ruth Punnett		
		GM Māori Health	Gary Coghlan		
		Director of Nursing and Midwifery	Jane O'Malley		
		Workforce Development, Primary Health Services	Cheryl Hutchinson		
		Associate Director of Nursing, MHS	Anne Tacon		
		GM Secondary Services	Chris Le Prou		
		Acting CMA, Acting Head of O&G Services	Tom Fiddes		
		Service Manager Allied Health, Diagnostics and Support Services	Raewyn McKnight		
		Internal Advisors	West Coast DHB	GP Liaison	Carol Atmore
				Finance Manager	Colin Weeks
Payroll Manager	Lyn Bruning				
External Advisors	DHBNZ	Project Manager, HWIP	William Hamilton		

Appendix Two The West Coast DHB Region

Geography and Population Size

The West Coast covers the area between Karamea in the north and Haast in the south and extends east to Springs Junction. Landmass length is approximately equal to the distance between Auckland and Wellington; a land area of 2.3 million hectares, much of which is rugged with scattered small and isolated pockets of population.

West Coast DHB



Although it occupies 8.5% of New Zealand's total landmass, the West Coast is home to 31,326 "West Coasters" (Usually Resident, Census 2006). The 2006 census shows a small increase in population residents in the region. Although the West Coast is currently moving through a period of economic growth, current projections are that population will fall to 30,900 by 2026¹. The West Coast has 0.8% of the total national population. The West Coast has the lowest population density of any DHB area in New Zealand with only 1.3 people per square kilometre, less than 10% of the New Zealand average. Tourists add an extra 14% to the resident population although numbers are not evenly dispersed throughout the region, with South Westland having proportionately higher numbers to usually resident population (e.g. Fox has 375 usual residents, and 1,500 tourist beds).

Demographics, Health Status and Deprivation

The West Coast is one of the most socio-economically deprived populations in the country. Of the three Territorial Local Authorities (TLAs) that make up the West Coast DHB area, the Buller district consistently has the highest level of deprivation when compared to the Westland and Grey districts. Nearly 50% of the West Coast population over the age of 15 has an annual income of \$20,000 per annum or less (52% for Māori) and 36% has no formal

¹ NZ Statistics sub national population projections by age and sex, 2006 (base)-2031

qualifications (compared with the New Zealand average of 25%). This figure is 42% for Māori (compared to 39.9% of New Zealand's Māori population). 15.4% of families in West Coast region are one parent with children families compared with 18.1% of families for New Zealand as a whole.

A wide range of health risks and indices have been found to be patterned by socio-economic factors such as deprivation, income, education, labour force status, housing and occupational class. For the West Coast, this deprivation is further exacerbated by the region's rural isolation and transport and communication difficulties. South Westland, while having a better socio-economic status compared to the other TLAs on the West Coast, is disadvantaged by its extreme geographic isolation.

Fertility and birth rates are low compared to the rest of New Zealand and the number of births is projected to decline over the next 30 years. The median age of the West Coast population in the 2006 census was 40.3 years compared to the median age of 35.8 years in the total New Zealand population.

There are higher morbidity and mortality rates and lower life expectancy on the West Coast compared with the New Zealand average, due in part to the demographic issues and the high deprivation levels in the region. Overall, males experience higher rates of mortality compared to both the New Zealand average and females living on the West Coast. In particular, there are higher rates of mortality from cancer, circulatory disease and respiratory disease (statistically significant using 99% confidence interval) and injuries. This affects more males than females, notably in the 40-69 years age group.

Hospitalisation rates are significantly higher when compared with the New Zealand average. Lead causes of ambulatory admissions in recent years have been angina, CORONARY HEART DISEASE, ischemic heart disease, stroke, respiratory infections, cellulitis, kidney and urinary tract infections, gastroenteritis, congestive heart failure and dental conditions.

West Coast residents have higher smoking rates compared with other areas in New Zealand (18.6% of the West Coast population are regular smokers). West Coast teenagers have the second highest rate of smoking in New Zealand.

Children and Young People

The health status of children and young people on the West Coast is poorer than the New Zealand average. In particular, children have among the worst oral health status in the country, and the West Coast has the lowest rate of caries-free five year old children in New Zealand with a contributing factor being the absence of fluoridation.² Immunisation rates are too low to provide adequate protection for the whole community.

Exposure to second hand smoke is a significant issue for West Coast children and youth.

Injuries are the leading cause of mortality and morbidity for Youth.

Older People

People aged 60 or more years use around 90% of hospital bed-days. People aged 75 or more years are high users of health services and also the highest users of long-term support

• ² A proposal to fluoridate was rejected by the Grey District community in a district council-run referendum undertaken in 2005, the Westland District Council also rejected a proposal to fluoridate water

services, such as home-care and residential care. The number of West Coasters aged 75+ years is rising by around 5% per year. This means that the number of cases of stroke, dementia, blindness, falls-related hip fractures and other serious and long-term conditions, will also rise by 5% a year.

This underlines the urgency and importance of a more preventive and proactive approach to helping older people maintain their health and fitness and reducing avoidable illness and injury as far as possible.

Māori Health

There is a smaller proportion of Māori living on the West Coast than in other areas of New Zealand (9% compared to the New Zealand average of 13%, which equates to 0.5% of the country's Māori population), although there was an increase of 14% in the West Coast Māori population between 2001 and 2006. The West Coast Māori population is expected to grow to 13.3% by 2021, with those aged over 55 years predicted to grow to 64.3% of the West Coast Māori population in the next ten years. The current median age of Māori on the West Coast (21.4 years) is slightly lower than the national median (22.7 years). The birth rate for Māori on Tai Poutini is significantly lower than for Māori elsewhere in New Zealand, though higher than for non-Māori on the Coast.

The West Coast DHB is committed to addressing health inequalities for Māori populations in the region. Through the implementation of its Māori health plan 'Te Kaupapa Hauora Māori 2007-2011' the West Coast DHB will address inequalities as outlined in the framework provided in He Korowai Oranga (Māori Health Strategy 2002) and Whakatātaka Tuarua: Māori Health Action Plan 2002-2005).

Māori residents on the West Coast perform slightly better across some demographic indicators than their counterparts from other regions, although fare substantially worse in other areas. For example, West Coast Māori have a longer life expectancy than New Zealand Māori generally and lower unemployment rates; however they earn lower incomes and a considerable proportion has no qualifications. A smaller proportion of West Coast Māori also speaks te reo Māori than the New Zealand average. The DHB's understanding of the West Coast Māori community has increased significantly due to information from the 2006 Census and the Māori health needs analysis currently underway. The West Coast Māori Health Profile-2007³ confirms that in terms of health, West Coast Māori have a poorer overall health status than non-Māori in the region. A range of indicators, including cardiovascular disease, cancer, diabetes and respiratory disease, demonstrates this. Though in many instances West Coast Māori have lower mortality and morbidity rates than Māori nationally, it is to be noted that West Coast Māori are under-represented among primary care utilisation data and have higher rates of smoking, which is a key risk factor for a range of morbidities such as cancer and cardiovascular and respiratory diseases.

Pacific and Asian Population

The region has a very small Pacific Island population although this is an area of growth; the number of people identifying themselves as being of Pacific origin almost doubled from fewer than 150 in 2001 to 282 in 2006.

The number of people identifying themselves as being of Asian origin has also grown and there are now 345 people in this ethnic group living on the West Coast.

Mental Health

Mental illness has a major impact on the overall wellbeing of individuals, families and communities. The World Health Organisation³ estimates that mental illness is second only to cardiovascular conditions as the major cause of 'years of life lost to premature death' and 'years lived with a disability and reduction in quality of life'

'Te Rau Hinengaro'⁴ is a mental health survey for the total New Zealand population completed in 2006. One of the objectives of the survey was to describe the prevalence rates of major mental disorders including substance disorders among people aged 16 years and over. The research found prevalence rates depended on the time period involved: 39.5% of the population have met criteria for a DSM IV mental disorder at sometime in their life, 20.7% had experienced disorder within the past 12 months and 11.6% in the past year.

The following table provides an estimate of the prevalence of serious, moderate and mild disorders of people aged 15 – 64 years living on the West Coast for a 12 month period. The population is spread across three Territorial Local Authorities (TLAs); 31% live in the Buller district, 41% in Grey and 28% in Westland.

Estimated prevalence of mental health and substance disorders for 12 month period amongst 15 – 64 year olds across the West Coast

	Serious disorder	Moderate disorder	Mild disorder
Te Rau Hinengaro	4.7%	9.4%	6.6%
Buller	307	615	431
Grey	406	813	571
Westland	277	555	390
Total	990	1,983	1,392

Based on a population of 21,100 and in total 4,365 or 20.7% are estimated to experience a mental health and/ or substance disorder. The estimates should be read with caution as there are a range of factors that may impact upon actual prevalence. Te Rau Hinengaro found disorders in the past 12 months were more prevalent amongst younger people, and those with less education, less income and living in more deprived areas.

Of the 20.7% of the West Coast population estimated to experience a disorder for a 12 month period, a sizeable group of 164.6 people (37.7%) are expected to have multiple disorders. There is a clear relationship between the number of disorders and severity.

In 2006-07 over 4.5% of the total West Coast population accessed Mental Health Services, exceeding the national 3% target for Mental Health Services. 74% of all clients seen were known to the Mental Health Service and to a degree this reflects a client group with enduring mental health needs. Others were either referred to Mental Health Services for the first time or had previously used the service and been discharged.

The mental health inpatient unit located at Grey Base hospital has 10 acute beds and 5 sub-acute beds. The Ministry of Health indicates that a benchmark of 15 acute beds per 100,000 is realistic. However attention should be given to future needs which may, for example, mean that fewer people require hospital care while those who do are likely to have more

³ <http://www.who.int/mediacentre/factsheets/fs220/en/index.html>

⁴ Te Rau Hinengaro: The New Zealand Mental Health Survey', Ministry of Health, 2006

intensive and individualised treatment and supports needs⁵. Reducing the number of acute inpatient beds from ten (current) will require investment in community services.

There are higher than average levels of drug, alcohol and substance abuse, with the availability and acceptability of cannabis being a particular cause for concern.

In 2006 - 2007 West Coast had the highest proportion of young people accessing Mental Health Services with 8.5% (compared to a national median of 3.9 %) of clients aged between 15 - 34 years.

Tourism

The West Coast is also a popular tourist destination with an average of approximately 4,500 visitors every day. It is expected that the region will attract 1.14 million visitors by 2009. In 2005, visitors spent a total of \$303.8 million and this is expected to increase to \$414.8 million by 2012. The growth in the number of visitors has in turn also affected demand for accommodation and restaurants on the West Coast. The region attracted 2.47 million visitors in 2005, who spent a total of \$303.8 million. By 2012, the number of visitors to the area is forecast to grow to 2.86 million and total visitor expenditure is expected to increase to \$414.8 million^{6[1]}.

Travel Times and Transport

The DHB's base hospital is located in Greymouth. On a fine day, with clear roads, Buller Hospital in Westport is 90 minutes to the north via the Coast Road and another 90 minutes from Karamea. The Coast Road is subject to delays and closure associated with unfavourable weather conditions, as is the Karamea Bluff between Westport and Karamea. From Greymouth it is four hours to Haast in the south via similar terrain and 3.5 hours to Christchurch in the east, via Arthur's Pass in the Southern Alps. Reefton is one hour and Hokitika 35 minutes travel time from Greymouth.

Bad weather and major traffic accidents can close the Arthur's Pass route and weather also disrupts both fixed wing and helicopter emergency flights. Only 64% of West Coast residents reside within 60 minutes ("The Golden Hour") travel time by car from secondary hospital services. Only 2% are within 180 minutes travel time by car from the nearest tertiary hospital at Christchurch. The absence of regular public transport for people living on the West Coast exacerbates the situation for those without access to private transport. Rainfall is around twice the national average, which may have implications for people with such illnesses as respiratory diseases or arthritis.

The difficulties experienced by the DHB in delivering health care to a small and dispersed population is exacerbated by the isolation of the West Coast from other centres providing secondary and tertiary level care. The level of care provided by the West Coast DHB is higher than it might otherwise be because of the inaccessibility of services in other centres due to distance and, on occasion, weather.

• ⁵ Page 3, *'Criteria for the Design and Refurbishment of Psychiatric Acute and Intensive Care Facilities'*, A Statement from the Ministry of Health, July 2002.

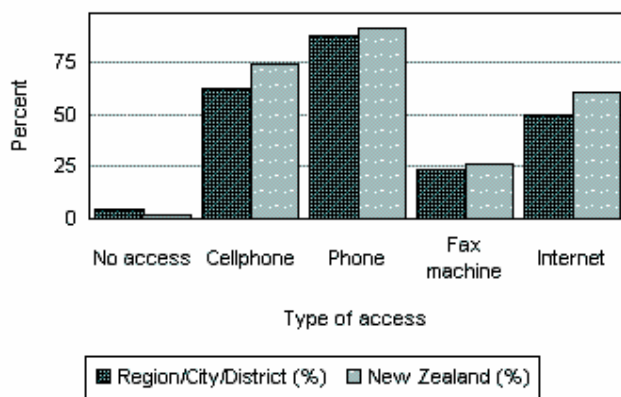
• ^{6[1]} BERL Regional database 2006, Statistics NZ.

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Household Access to Phone and Internet

In the West Coast Region 87.8% of households have access to a telephone, compared with 91.6% of households for New Zealand as a whole; and 49.8% of households in West Coast Region have access to the Internet, compared with 60.5% of households throughout New Zealand.

Household Access to Phones, Internet and Fax Machines- West Coast Region and New Zealand [Statistics NZ, 2006 Census]



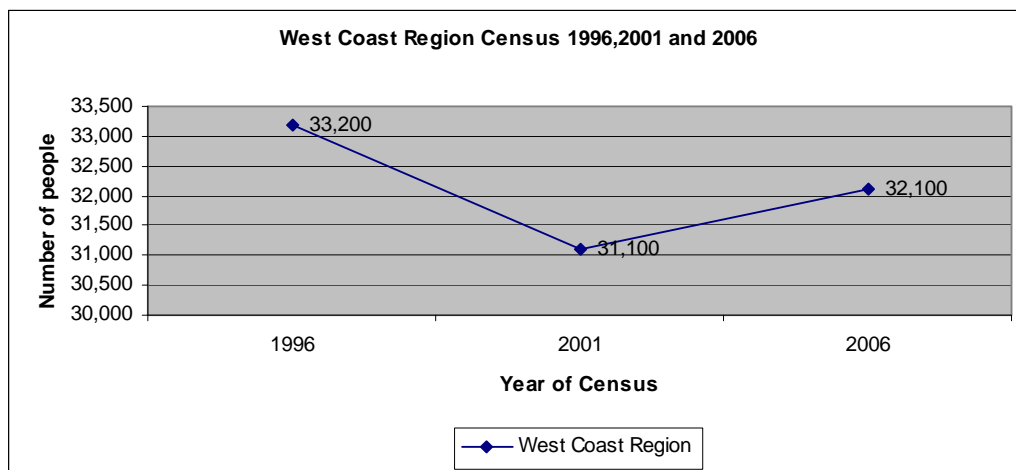
Demand on Health Services and Infrastructure

High-risk industries such as mining, pastoral farming, fishing, forestry and cement are prevalent on the West Coast. Inadequate infrastructure for waste and sewage disposal for dairy farming and tourism industries in some areas has the potential to lead to outbreaks of acute gastroenteritis. Apart from substandard water supplies and improper waste disposal, the other environmental health issues the West Coast region faces are substandard housing, industrial activity leading to potential environmental health problems and air quality issues.

Future Demographics and Population Needs Assessment 10 to 15 Years On

The 2006 census had shown a small population increase compared to the previous census. However, in terms of total national population, the West Coast fell from 0.8% to 0.7% of the total population.

Population change from 1996 to 2006 [Adapted from Statistics New Zealand]



Population Projections for West Coast

The table below gives the West Coast population projection for the next 20 years.

Projected population change for the West Coast [Source: Statistics NZ]

Variant	Population at 30 June					Change 2006-2026	
	2006	2011	2016	2021	2026	Number	Percent
High	31,200	31,400	31,500	31,500	31,400	200	1
Medium	30,600	30,000	29,300	28,500	27,700	-2,900	-9
Low	29,900	28,600	27,200	25,700	24,000	-5,900	-20

Overall the West Coast has an aging population with 14% of all residents currently aged over 65. This is predicted to grow 20.9% in the next ten years. The Māori population however does not follow this pattern with 54% of the current Māori population aged under 25 (compared to 31% of the total) and just 4% of Māori aged over 65. The Māori population aged over 65 years is predicted to grow in the next ten years.

The total population aged over 65 years living on the West Coast is projected to increase by 84% in the next 20 years. This rate of increase is somewhat lower than in other areas, probably for two key reasons. Fewer West Coasters live to old age as those aged 65 years have higher mortality rates, particularly from cardiovascular disease, diabetes and respiratory illness. Also a number of older people move away from the Coast as their need for health and support services grows.

However, even a 4.2% yearly increase in the 65+ age group and 5% increase in the 75+ year age group, the highest users of services, will put major pressure on services in the next ten years, necessitating a 4-5% yearly increase in the resources going into long-term support services and health services for disabling conditions such as stroke and dementia.

Although the Maori older population is smaller, it is disproportionately less healthy than the older West Coast population as a whole, and a significant increase of people needing health and support services from the 55+ age group onwards is expected.

Projected Population change by age, gender and TLA over the next 20 years [Source: Statistics NZ]

	Male							
	0-14 Years		15-39 Years		40-64 Years		65 Years and over	
	2006	2026	2006	2026	2006	2026	2006	2026
West Coast Region	3,400	2,700	4,700	4,000	6,100	4,800	2,200	4,200
Buller District	1,000	790	1,300	960	2,000	1,530	780	1,440
Grey District	1,500	1,300	2,050	1,900	2,400	1,900	850	1,600
Westland District	850	630	1,310	1,130	1,670	1,320	520	1,150

	Female							
	<u>0-14 Years</u>		<u>15-39 Years</u>		<u>40-64 Years</u>		<u>65 Years and over</u>	
	2006	2026	2006	2026	2006	2026	2006	2026
West Coast Region	3,100	2,500	4,700	3,700	5,600	4,900	2,300	4,100
Buller District	930	760	1,340	990	1,800	1,490	780	1,350
Grey District	1,400	1,200	2,050	1,700	2,250	2,000	1,000	1,600
Westland District	800	600	1,360	1,020	1,550	1,430	540	1,130

The West Coast is also has an average of approximately 4,500 tourists and visitors every day. It is expected that the region will attract 1.14 million visitors by 2009.

Future Health Needs for the West Coast

With a projected growth in specific populations such as the elderly and Māori youth population⁷, present health inequalities among these groups could continue into the future. Moreover with a projected overall population decline over the next twenty years, difficulties for health service delivery will persist because of the continuing sparsity of the population distribution and geographical isolation.

Managing and treating chronic diseases will be an important issue to consider while forecasting health needs for the West Coast as elsewhere in New Zealand. However the rurality, socio-economic deprivation and shortage of health resources and health professionals on the West Coast may compound this problem further. Future models of care or health programmes should place a heavy emphasis on population health principles such as health promotion, increasing upstream investments, applying multiple strategies, collaborating across sectors and levels and employing mechanisms for public involvement⁸. This approach will decrease the incidence of chronic diseases in the long-term, ease the burden of managing chronic diseases for the primary and tertiary health sectors, reduce the rate of entry to long-term residential care and place some of the responsibility of managing health in the hands of the community.

This also necessitates a revision of the traditional idea that 'preventive programmes should be directed primarily to younger people. There is compelling evidence that proactive and preventive programmes to help older people retain physical activity, maintain muscle strength and balance, and good nutrition, and stop smoking have a quicker and bigger payoff than among young age groups in terms of hospital bed-days saved.

Further to this, ensuring availability of health care professionals and adequate primary and secondary health services, consideration of environmental health issues in planning health

• ⁷ Statistics New Zealand

• ⁸ Public Health Agency of Canada -"What determines health?"- <http://www.phac-aspc.gc.ca/ph-sp/phdd/determinants/index.html>

•

services, and use of innovative health technologies to fill in gaps of health service delivery would all be necessary to answer future health needs of the West Coast population.

Appendix Three Inter District Flow Data (IDF)

Count of Agency name		Admission type			
Financial y	Facility name	Arranged A	Acute Adm	Waiting Lis	Grand Total
2004/05	Ashburton		1		1
	Auckland City Hospital	2	4	5	11
	Burwood	6	2	27	35
	Christchurch	85	162	220	467
	Christchurch Womens	27	36	9	72
	Dargaville	2			2
	Dunedin	3	1	4	8
	Dunstan		5		5
	Gisborne		1		1
	Kowhai Manor Hospital	9			9
	Manuka Street Trust	1			1
	Middlemore		3		3
	Mobile Surgical Unit	28			28
	Nelson	11	21	25	57
	Nelson Marlborough Mental Health Services	1	3		4
	North Shore		2		2
	Nova Trust		1		1
	Palmerston North		1	1	2
	Princess Margaret	8			8
	Rangiora	2			2
	Richard Seddon Hospital	8			8
	Rotorua		1		1
	Salvation Army Bridge - Invercargill		1		1
	Southland	2	1		3
	St Georges	5		24	29
	Sunnyside	4	9		13
	Tauranga	1	1		2
	Timaru		1	1	2
	Waikato		1		1
	Wairarapa Hospital		1		1
	Wairau	1	5		6
	Wakari		1		1
	Wanganui		2		2
	Wellington	1	2		3
	Whangarei Area Hospital		4		4
2004/05 Total		207	273	316	796

2005/06	Alexandra Home	1			1
	Arthur Mc Caa Health Centre		1		1
	Ashburton		1		1
	Auckland City Hospital	5	6	13	24
	Burwood	20	6	47	73
	Christchurch	210	313	371	894
	Christchurch Womens	88	48	14	150
	Darfield	4			4
	Dunedin	5	11	5	21
	Dunstan		7		7
	Ellesmere	1			1
	Hutt		1		1
	Kowhai Manor Hospital	3			3
	Lakes District		3		3
	Lincoln	4			4
	Manuka Street Trust	9			9
	Middlemore	1	6		7
	Mobile Surgical Unit	56		41	97
	Nelson	29	32	53	114
	Nelson Marlborough Mental Health Services	1	2		3
	North Shore	1	3		4
	Palmerston North		5	1	6
	Princess Margaret	13			13
	Rangiora	2			2
	Rhoda Read	1			1
	Richard Seddon Hospital	7			7
	Rotorua		1		1
	Southland	1	4		5
	St Georges	12		42	54
	Sunnyside	5	5		10
	Taranaki Base		1		1
	Taupo General		1		1
	Tauranga	1			1
	Timaru	2	4	3	9
	Waikato		1		1
	Wairarapa Hospital		1		1
	Wairau		5	2	7
	Waitakere		1		1
	Wakari		6		6
	Wellington	8	9	4	21
	Whangarei Area Hospital		3		3
2005/06 Total		490	487	596	1573

2006/07	Ashburton		2		2
	Auckland City Hospital	10	12	11	33
	Burwood	8	7	56	71
	Christchurch	298	274	420	992
	Christchurch Womens	100	48	16	164
	Darfield	1	1		2
	Dunedin	5	15	7	27
	Gisborne		1		1
	Golden Bay Community Hospital		1		1
	Hastings Memorial		3		3
	Helensville Birthing Unit	1			1
	Hutt		1		1
	Lakes District		1		1
	Lincoln			1	1
	Middlemore		4		4
	Mobile Surgical Unit	77		11	88
	Motueka Community Hospital	1			1
	Nelson	33	30	34	97
	Nelson Marlborough Mental Health Services	1	4		5
	North Shore	2	3	2	7
	Oamaru		1		1
	Oxford	1	1		2
	Palmerston North		4	1	5
	Pohlen Trust	1			1
	Princess Margaret	15			15
	Rangiora	2			2
	Southern Cross Trust, Christchurch			7	7
	Southland	2	2		4
	St Georges	11		47	58
	St Georges Radiology			1	1
	Sunnyside	5	5		10
	Tauranga			1	1
	Timaru		9		9
	Waikato	1	2		3
	Wairarapa Hospital		1		1
	Wairau	6	10	5	21
	Wakari	3			3
	Wellington	5	14		19
	Whangarei Area Hospital		1		1
	Winton Birthing Centre/Central Southland B. Unit	2			2
2006/07 Total		591	457	620	1668

Appendix Four Emergency Departments Data

Introduction

The following data is presented from the Emergency Department presentations for WCDHB between 1 July 2006 – 31 May 2008. It should be noted that there may be some coding errors in the source data.

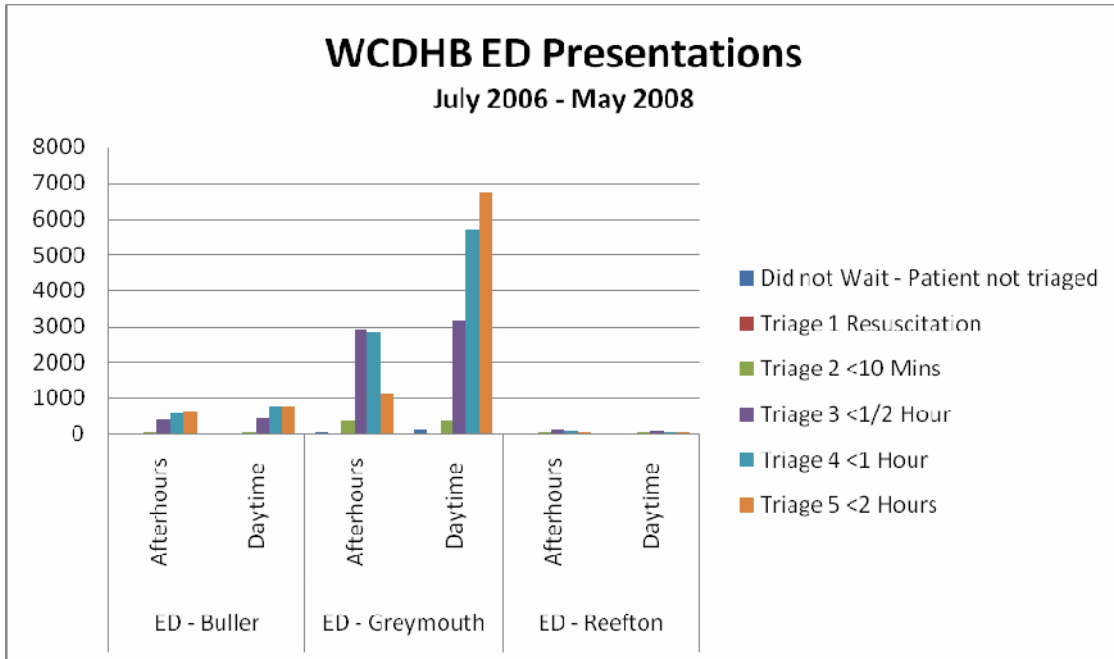
Presentations by Emergency Department

There are three Emergency Department's within West Coast DHB (Grey Hospital, Buller and Reefton Hospitals). Grey Base hospital saw 85 percent of all presentations whilst Buller saw 13 percent and Reefton saw 2 percent. Overall, there were 27,591 presentations in the period between 1 July 2006 and 31 May 2008 (approximately 14,395 presentations per year).

There were more day time presentations than after hour's presentations.

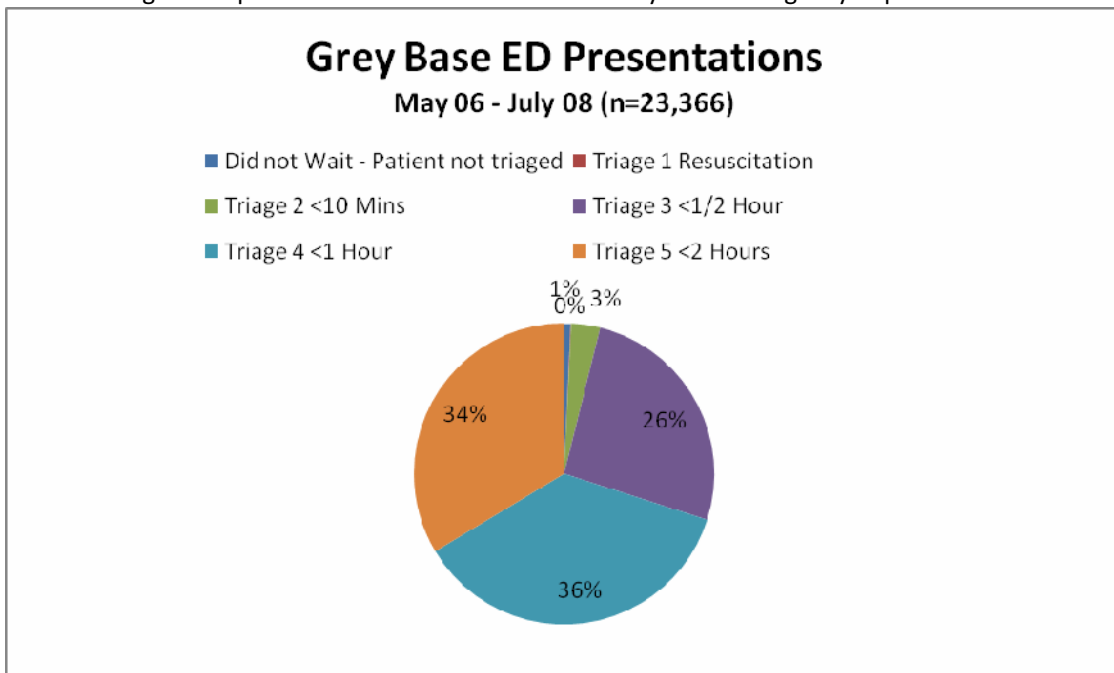
Emergency Department	Number of presentations	Percentage
Grey After Hours	7,283	31
Grey Day Time	16,083	69
Buller After Hours	1,589	44
Buller Day Time	2,058	56
Reefton After Hours	284	49
Reefton Day Time	294	51

There were 17 triage level 1 presentations in the period July 2006 – May 2008. Fifteen were at Grey Hospital whilst the 7 were at Buller Hospital and 1 at Reefton Hospital. There were 876 triage level 2 presentations in the same period. Overall, 70 percent of all presentations were triage level 4 or 5. Given the population that each of these emergency departments serves, the data suggests a high attendance of triage level 4 or 5 patients for each region.



Presentations by Triage Level and Emergency Department

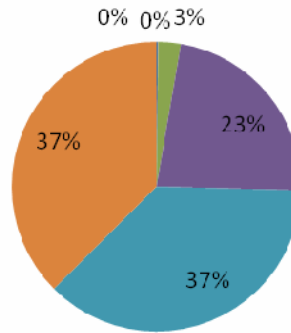
The following charts provide more detailed information by each emergency department.



Buller ED Presentations

July 06 - May 08 (n= 3647)

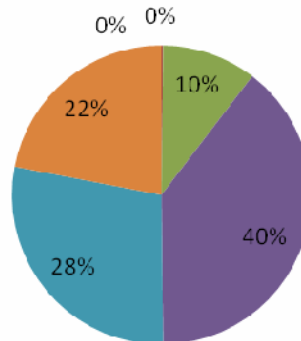
- Did not Wait - Patient not triaged
- Triage 1 Resuscitation
- Triage 2 <10 Mins
- Triage 3 <1/2 Hour
- Triage 4 <1 Hour
- Triage 5 <2 Hours



Reefton ED Presentations

July 06 - May 08 (n = 528)

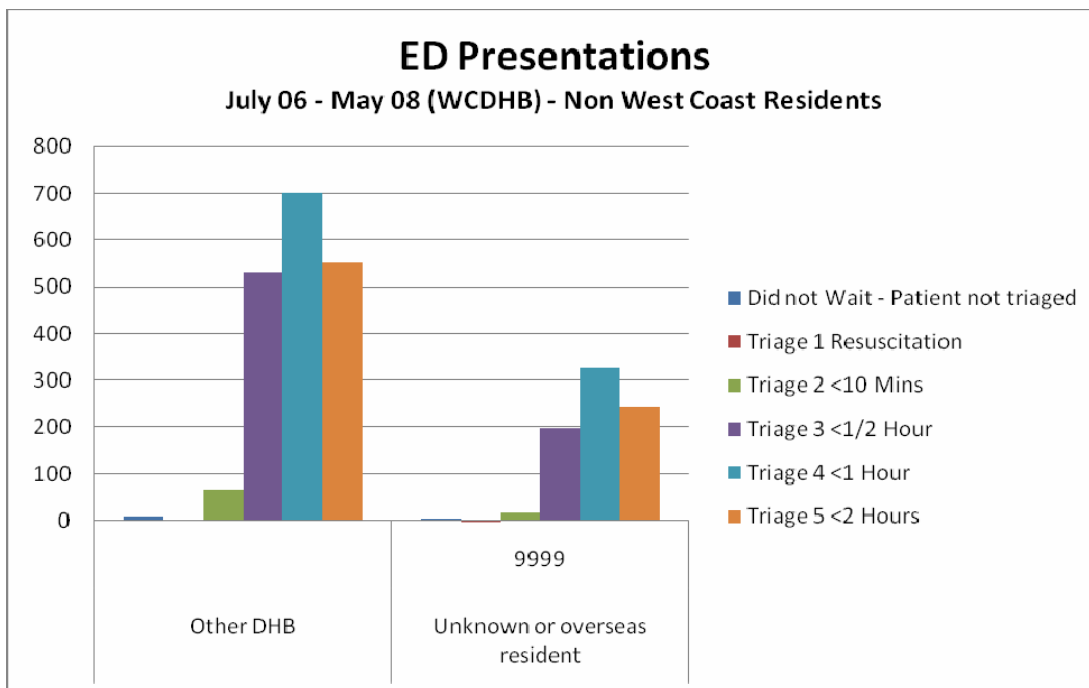
- Did not Wait - Patient not triaged
- Triage 1 Resuscitation
- Triage 2 <10 Mins
- Triage 3 <1/2 Hour
- Triage 4 <1 Hour
- Triage 5 <2 Hours



Non West Coast Residents

There were 2652 presentations of people not resident in the West Coast. Seventy percent (1860) were residents from other DHBs whilst the remaining 30 percent were from overseas or there residence status was unknown.

Sixty percent were triage level 4 or 5. Twenty seven percent were triage level 3 and 3 percent were triage level 2. There was no triage level 1's in this period for this sub-set of patients.



Discharge Status

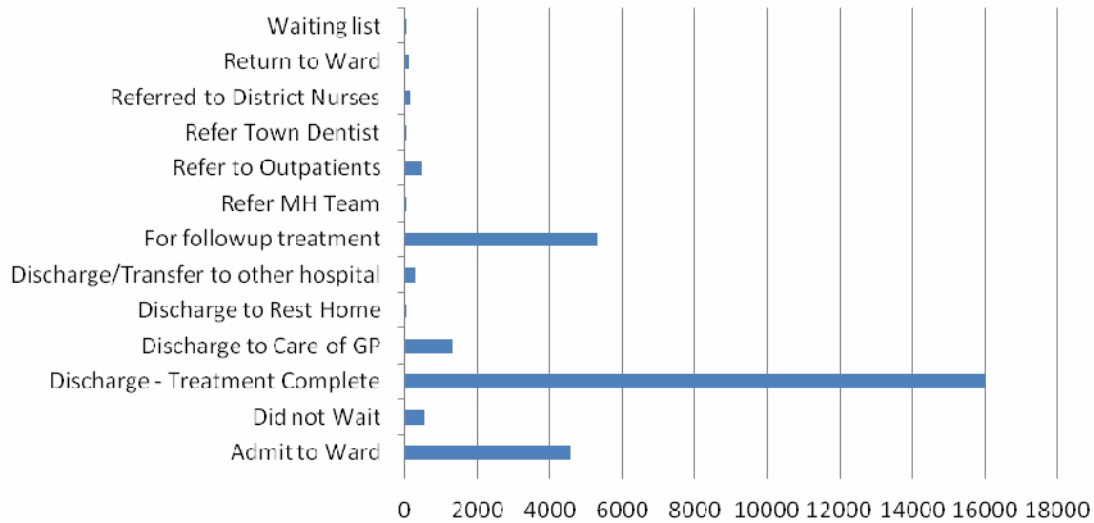
Of the 28,771 patients presenting to an emergency department between the period July 2006 and May 2008, 56 percent were discharged home with treatment completed. An additional 2 percent did not wait to be assessed.

16 percent were admitted to a ward within WCDHB. One percent were discharged or transferred to another hospital (7 patients of which 2 were transferred to Grey Hospital – 1 from Reefton and 1 from Buller; 4 patients were discharged to Christchurch Hospital and 1 to Nelson Hospital).

21 percent (5,983 patients) were referred for further treatment to District Nursing Services, Mental Health Services, Outpatients or for Dental Care.

Discharge Status Emergency Department Patients

July 2006 - May 2008 (n=28,771)

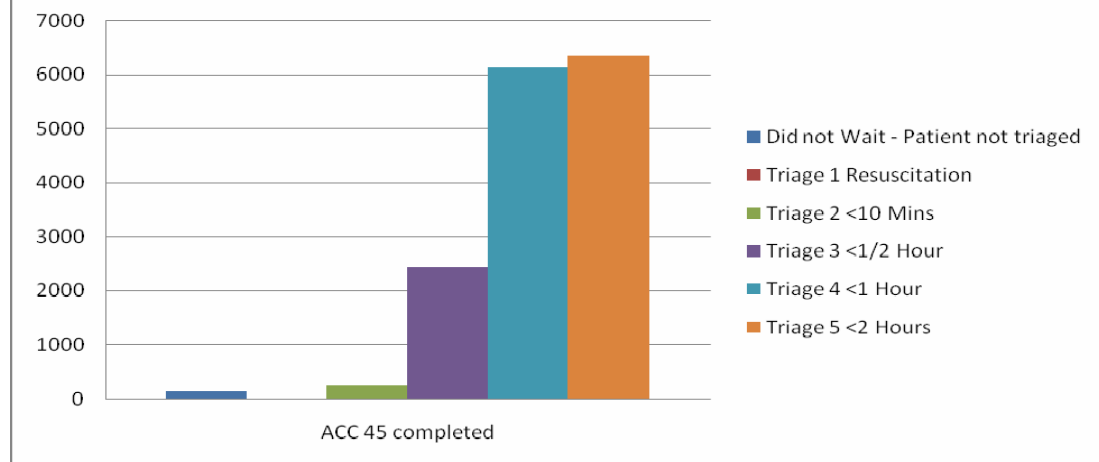


ACC Status

Of the presentations, 54 percent were ACC claimants. 81 percent were triage level 4 or 5.

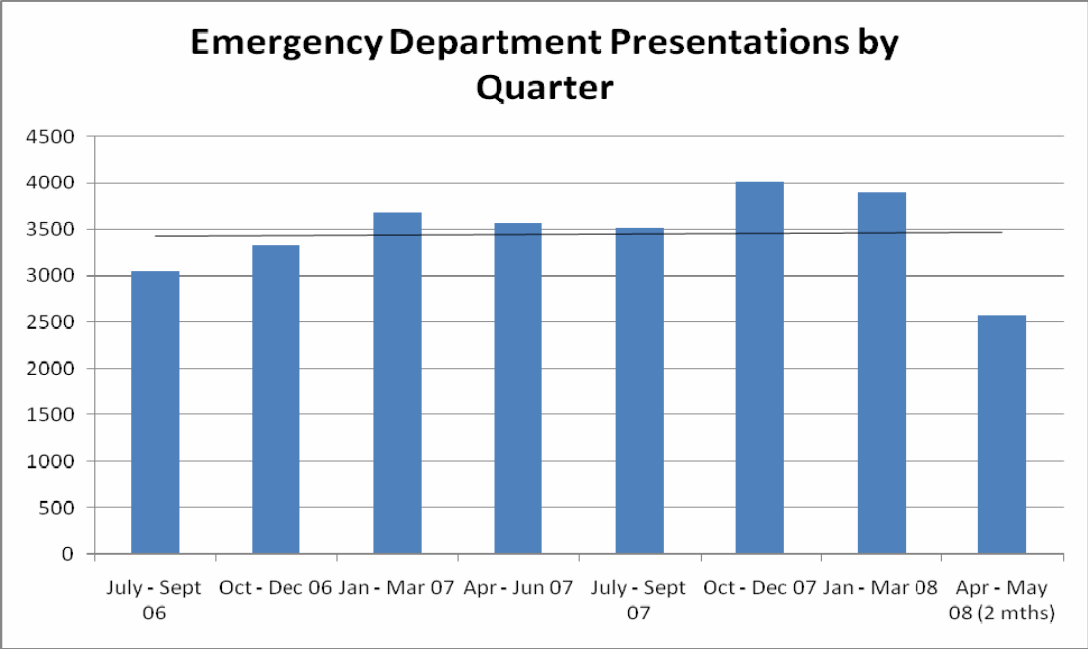
Emergency Presentations WCDHB ACC 45 completed & Triage Status

July 2006 - May 2008
(n=15290)



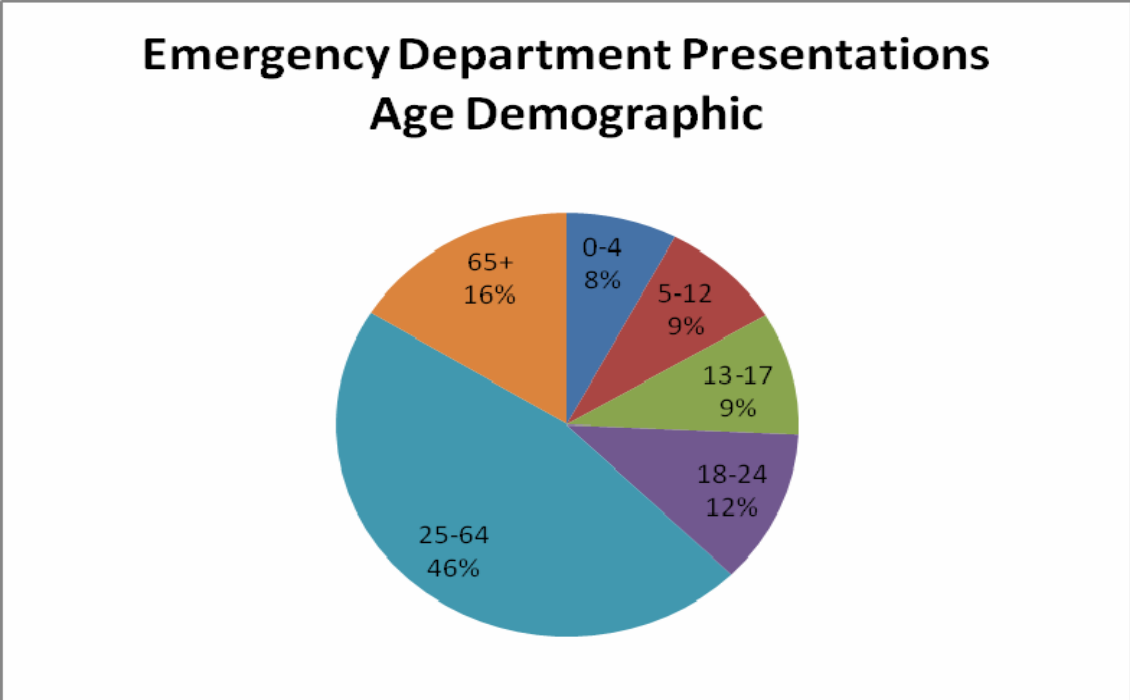
Trend by quarter

The following graph indicates a trend of approximately 3,500 presentations per quarter. Note the last quarter is incomplete being two months and not three.



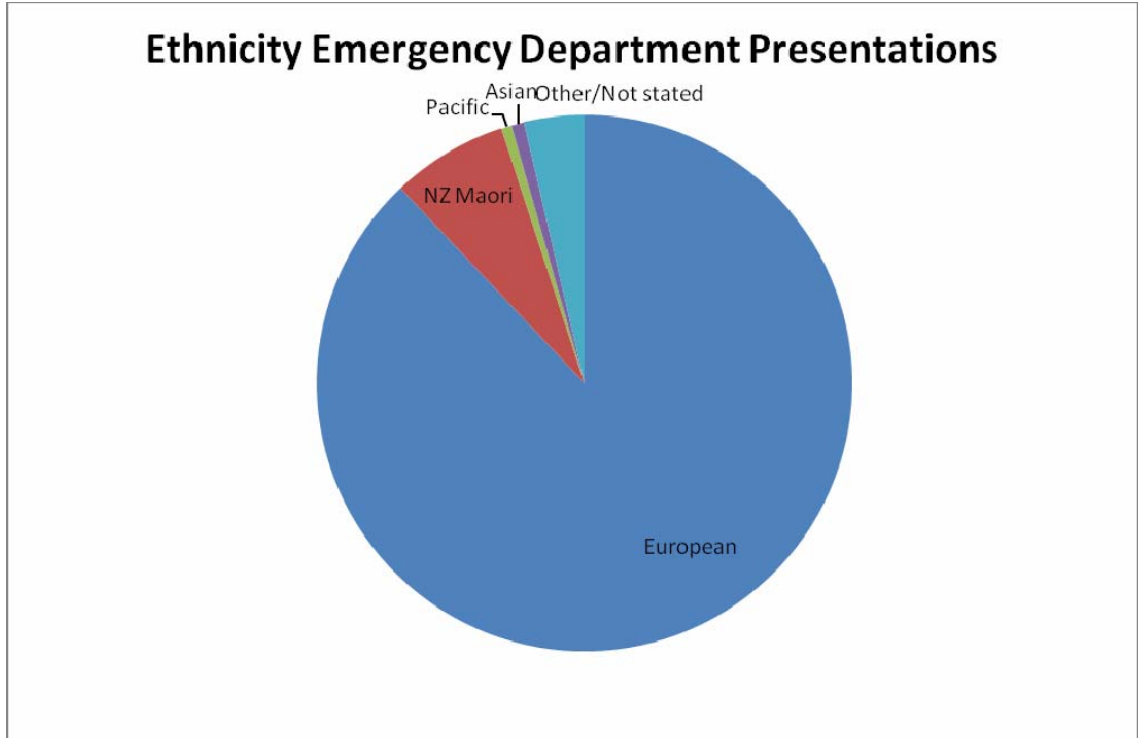
Age

74 percent of people presenting to the emergency department are adults (over the age of 18 years).



Ethnicity

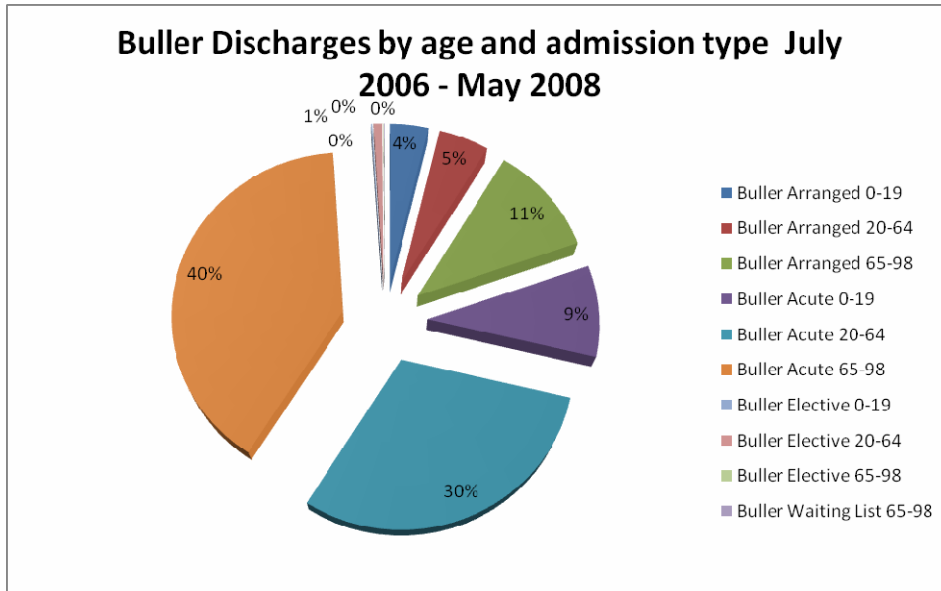
88 percent of presentations were European (European, NZ European, European not further defined), 7 percent were NZ Maori.



Appendix Five

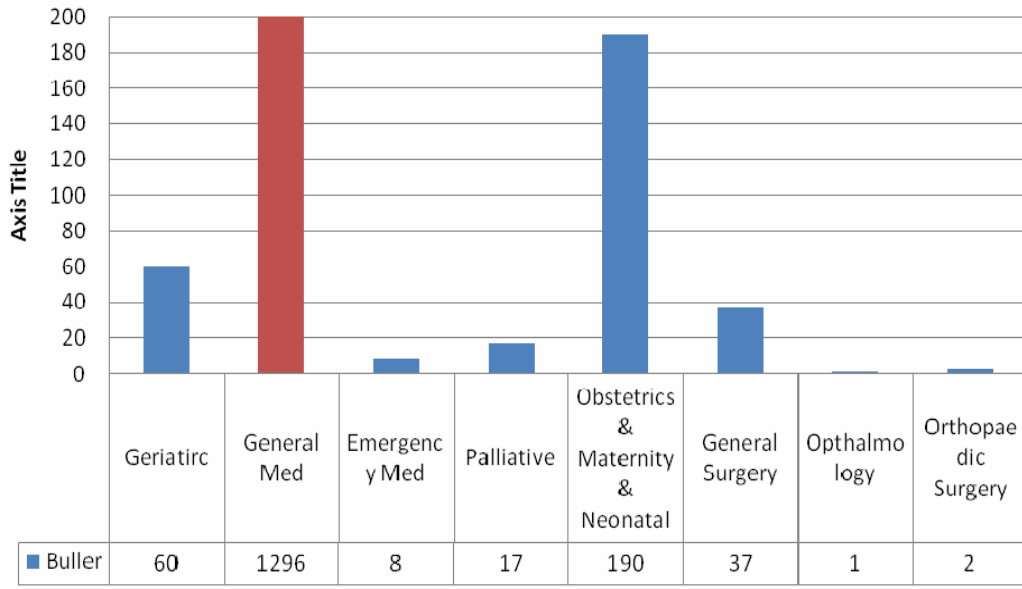
Buller Health Centre Data

A total of 1,611 patients were discharged from Buller Hospital between July 2006 and May 2008. Of these admissions 1,277 were classified as acute admissions (79 percent) and of these 91 related to neonatal or paediatric admissions (age < 0). Sixty-three percent were arranged and 37 % acute admissions.

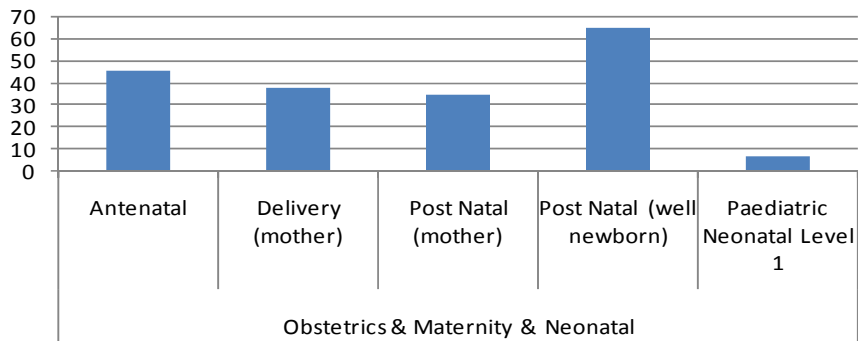


There were 1,296 medical discharges in this period accounting for 80 percent of discharges. Obstetric, maternity and neonatal services accounted for 12 percent of discharges. This included 7 neonatal level 1 (special care) discharges to Grey Base Hospital.

Buller discharges July 2006 - May 2008 by specialty

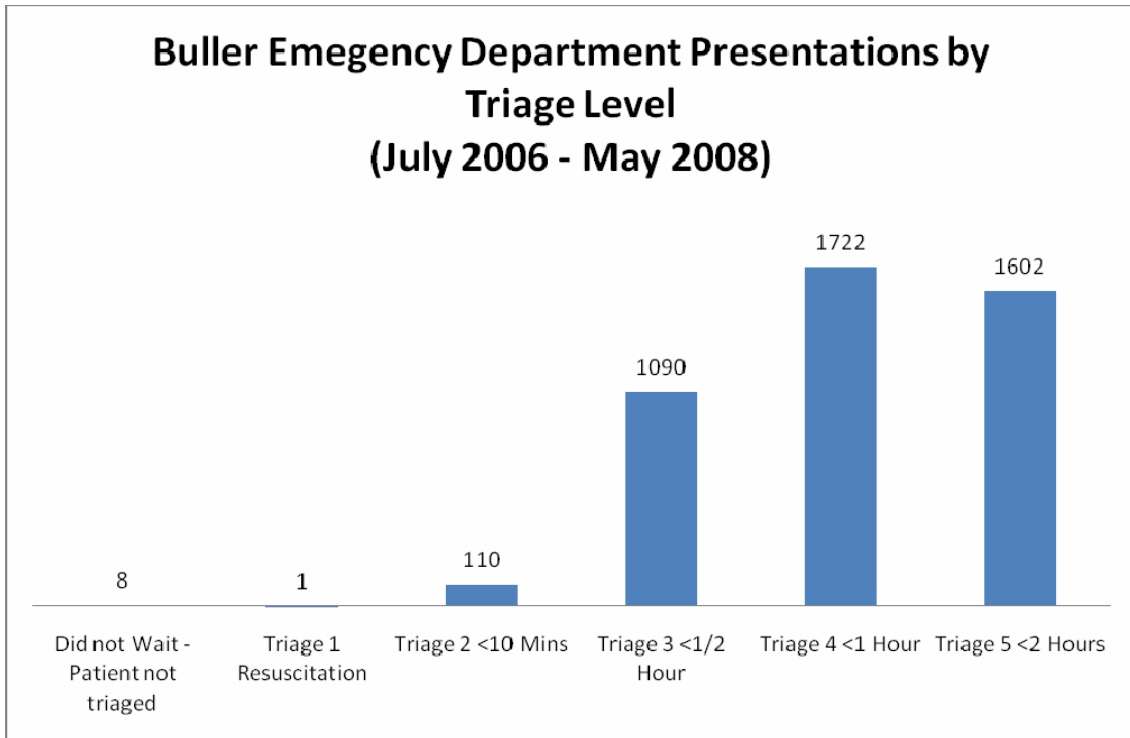


Buller Discharges July 2006 - May 2008



Emergency Department Triage Data (July 2006 – May 2008)

Count of Triage Code		
Area	Discharge Status	Total
ED - Buller	Admit to Ward	839
	Did not Wait	20
	Discharge - Treatment Complete	3074
	Discharge to Care of GP	156
	Discharge to Rest Home	2
	Discharge/Transfer to other hospital	83
	For follow up treatment	324
	Refer MH Team	1
	Refer to Outpatients	2
	Refer Town Dentist	1
	Referred to District Nurses	4
	Return to Ward	27
	ED - Buller Total	
Grand Total		4533



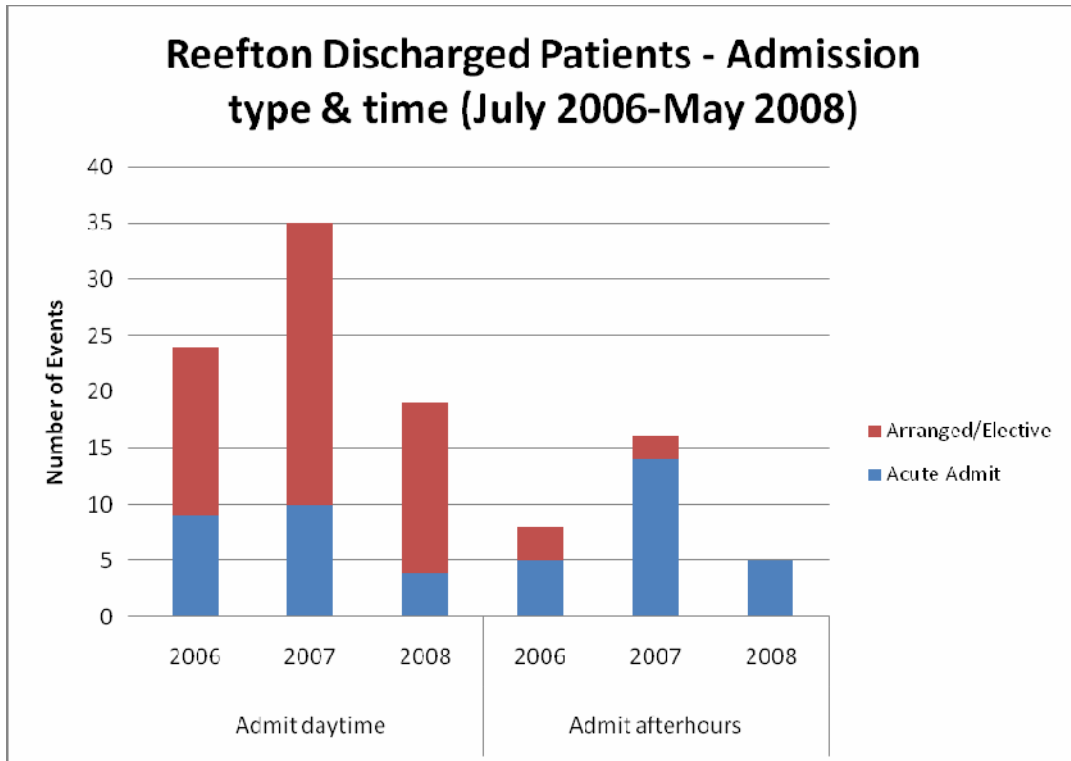
Appendix Six

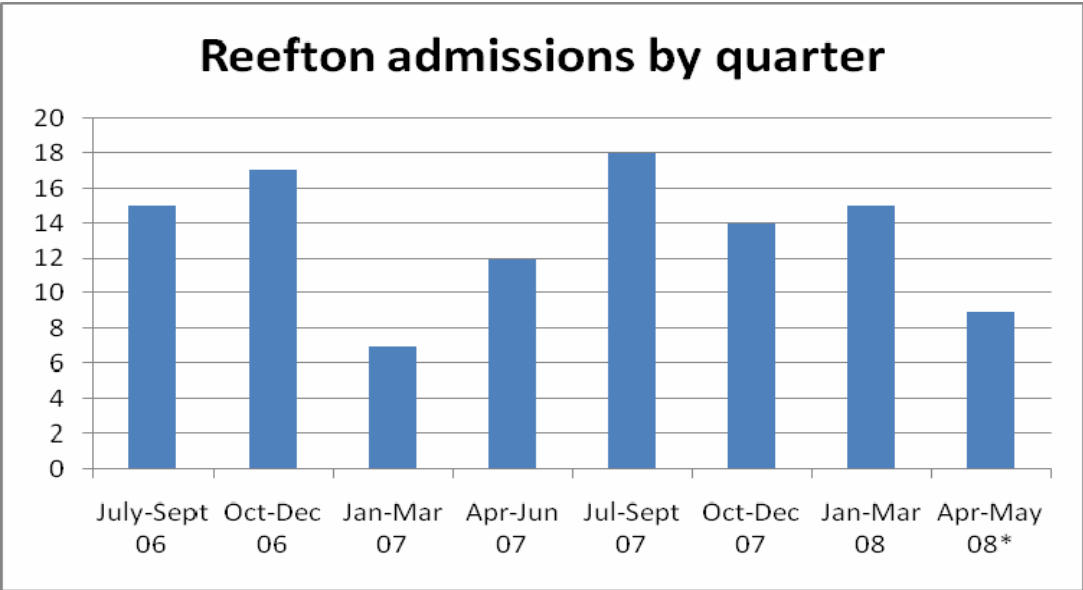
Reefton Health Centre Data

The following review utilises a discharge data set for the period July 2006 – May 2008.

A total of 107 patients were discharged from Reefton Hospital between July 2006 and May 2008. Of these admissions 47 were classified as acute admissions (43 percent).

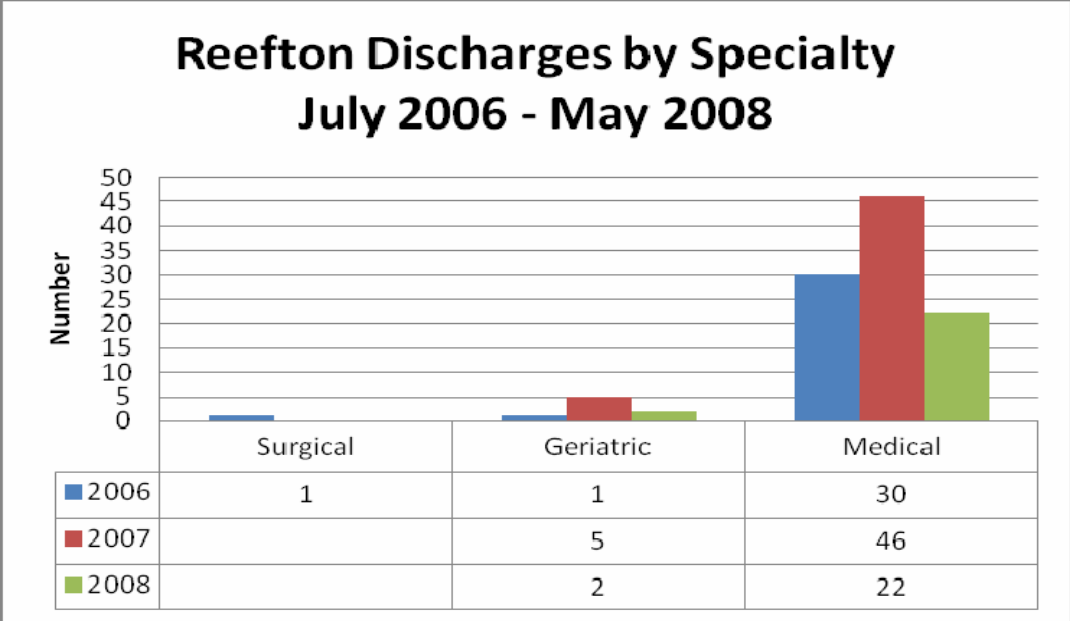
There were no paediatric admissions during this period (which is consistent with Reefton Hospital admitting criteria).



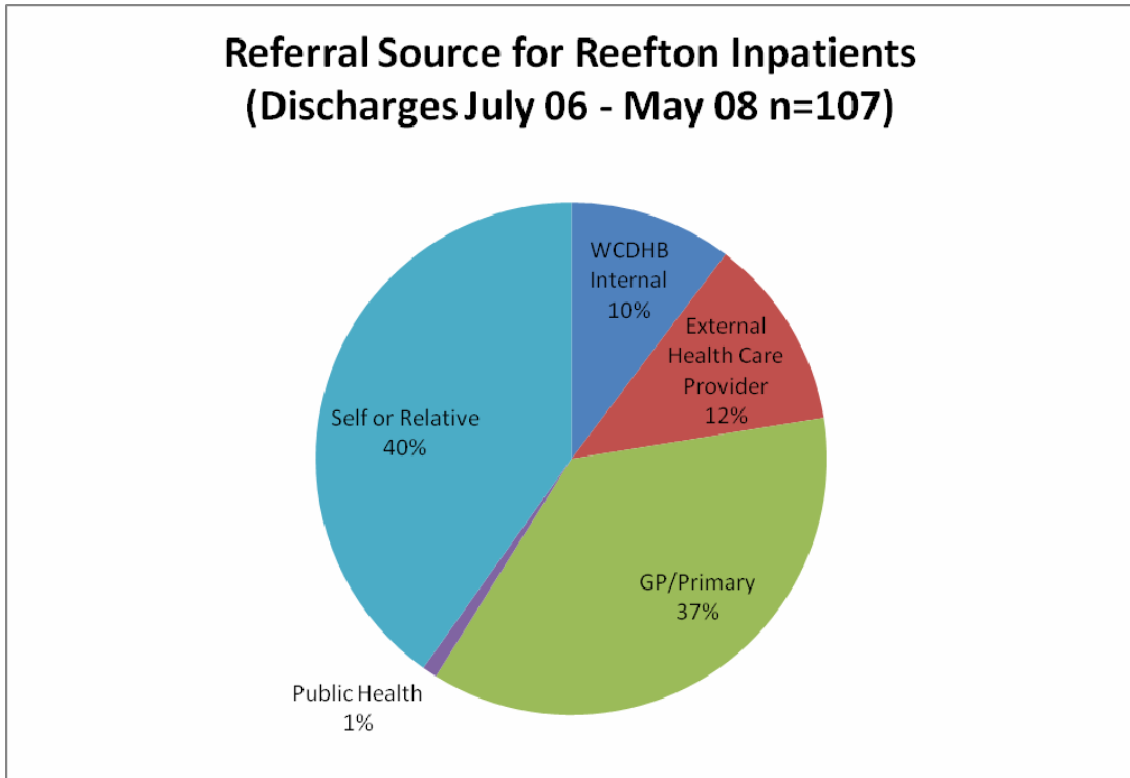


*Data for April – May 08 is for a two month period.

The majority of discharges were medical as the geriatric service is a long stay service.

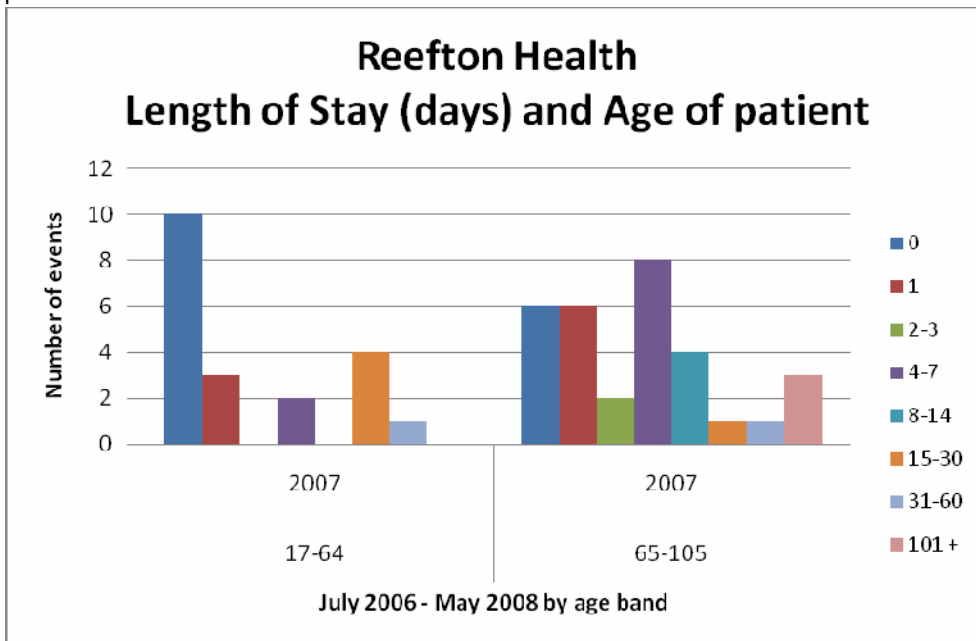


Source of referral



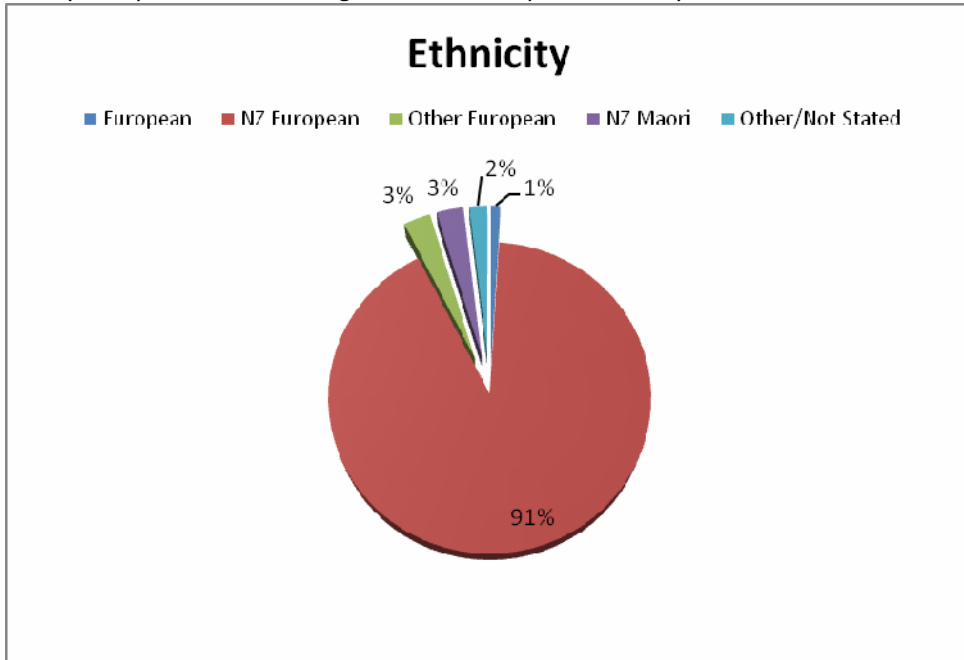
Length of Stay

Note this data is from a discharge data set so will not reflect those long stay geriatric patients that are current residents.

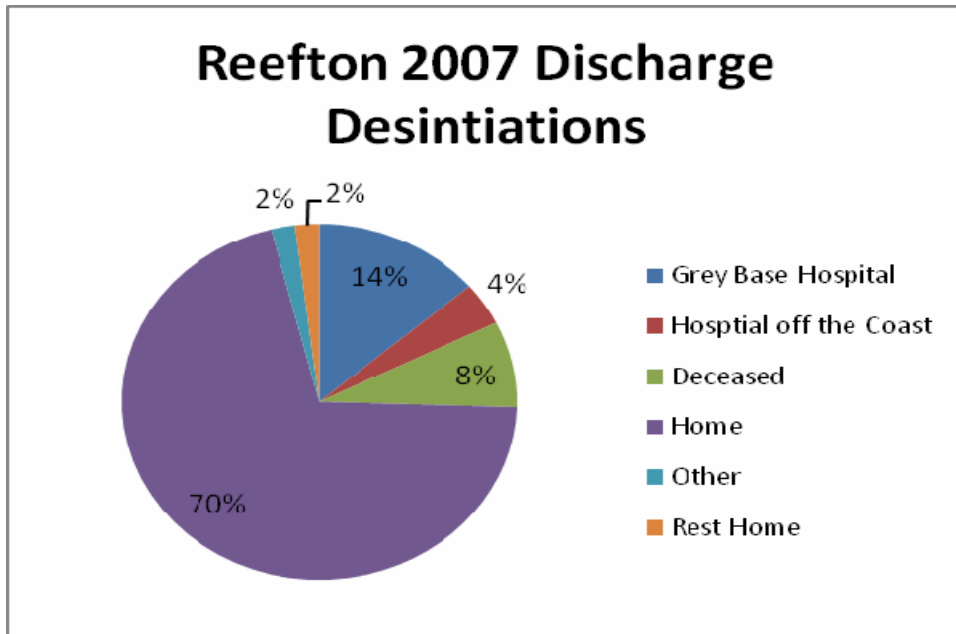


Ethnicity

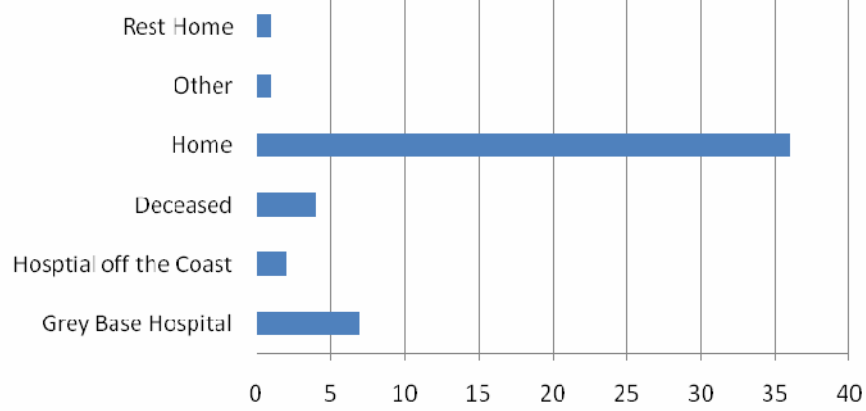
Ninety-one percent of discharges were of European Ethnicity.



Discharge Destination



Reefton 2007 Discharge Destination



Note that Hospital off the Coast is Christchurch Hospital in all cases.

Emergency Department Triage Data (July 2006 – May 2008)

Count of Triage Code	Discharge Status										Grand Total
	Age	Admit to Ward	Did not Wait	Discharge - Treatment Complete	Discharge to Care of GP	Discharge/Tra nser to other hospital	For follow up treatment	Refer to Outpatients	Referred to District Nurses Ward		
0				11		5					16
1				7	2	1					10
2				3		2					5
3				11	2	1					14
4				10	1						11
5-12				68	11	7	2	1			89
13 - 17				38	6	10	1				55
18-24				65	6	15	7	2			95
25 - 64		7	1	217	27	37	10			1 2	302
65 +		5		61	7	18	2				93
Grand Total		12	1	491	62	96	22	3		1 2	690

