



Capital & Coast District Health Board

Health Needs Assessment

Second Edition – Version One

September 2004

Table of Contents

Table of Contents	2
Figures	5
Tables	9
Introduction	12
Objectives.....	12
Scope	12
Structure	13
Chapter 1: Executive Summary	14
1.1 Population	14
1.2 Priority conditions	15
1.3 Other issues affecting health and wellbeing	16
1.4 Changes since the last Health Needs Assessment	17
1.5 Areas of particular concern	17
Chapter 2: Data and Methods	18
2.1 Background: Ministry and legislative guidelines	18
2.2 Health Needs Assessment and DHB planning	18
2.3 Choice of Health Needs Assessment methods	19
2.4 Measuring health needs	19
2.5 Data sources	21
2.6 Data gaps and quality issues	21
Chapter 3: Population and determinants of health	21
3.1 Overview	21
3.2 Total population	21
3.3 Age distribution.....	21
3.4 Gender distribution.....	21
3.5 Ethnic distribution	21
3.6 Iwi demographics.....	21
3.6 New Zealand deprivation index.....	21
3.8 Immigration.....	21
3.9 Household size and crowding	21
3.10 Income and benefits	21
3.11 Employment and education	21
3.12 Telephone access	21
3.13 Motor vehicles.....	21
3.14 Environmental determinants of health	21
Chapter 4: Current Services	21
4.1 Overview	21
4.2 Primary and Community Care	21
4.3 Aged Care and Disability	21
4.4 Mental Health and addiction services	21
4.5 Secondary and Tertiary Care	21
4.6 Maori	21
4.7 Pacific	21
4.8 Public Health	21
Chapter 5: Priority Areas	21

5.1	Introduction	21
5.2	Cardiovascular	21
5.3	Cancer	21
5.4	Diabetes.....	21
5.5	Population health	21
5.6	Suicide	21
5.7	Respiratory health.....	21
5.8	Disability	21
5.9	Other priority areas	21
5.10	Child health.....	21
5.11	Health of older people.....	21
Chapter 6: Maori		21
6.1	Overview	21
6.2	Introduction	21
6.3	Cardiovascular	21
6.4	Cancer	21
6.5	Diabetes.....	21
6.6	Population health	21
6.7	Suicide	21
6.8	Respiratory health.....	21
6.9	Disability	21
6.10	Child health.....	21
Chapter 7: Pacific		21
7.1	Overview	21
7.2	Introduction	21
7.3	Cardiovascular	21
7.4	Cancer	21
7.5	Diabetes.....	21
7.6	Population health	21
7.7	Suicide	21
7.8	Respiratory health.....	21
7.9	Disability	21
7.10	Child health.....	21
Chapter 8: Gender issues		21
8.1	Introduction	21
8.2	Life expectancy and mortality.....	21
8.3	Injuries	21
8.4	Cardiovascular	21
8.5	Population health	21
8.6	Mental health.....	21
8.7	Suicide	21
Chapter 9: Summary of gaps.....		21
9.1	Introduction	21
9.2	High needs population groups	21
9.2	Conditions with high burden of disease	21
9.4	Issues affecting health and wellbeing.....	21

Bibliography21
Acknowledgments21

Figures

Expected 5 year change in population by age group, 2001-2006, C&C DHB.....	21
Trend in life expectancy by gender, NZ, 1950-2002.....	21
Life expectancy by gender and deprivation, NZ, 1998-2000	21
Mortality by ethnicity and age, C&C DHB, 2000.....	21
Maori mortality by age and gender, C&C DHB, 1990-2000	21
Pacific mortality by age and gender, C&C DHB, 1990-2000	21
Other mortality by age and gender, C&C DHB, 2000	21
Avoidable and unavoidable deaths, C&C DHB, 1988-2000.....	21
Trend in avoidable mortality by gender, C&C DHB, 1988-1999	21
Trend in avoidable mortality by ethnicity, C&C DHB, 1988-1999	21
Population of TLAs by age group, compared to NZ.....	21
C&C DHB district population compared with New Zealand population	21
C&C DHB district population by age and gender.....	21
Kapiti ethnic/age distribution.....	21
Porirua ethnic/age distribution	21
Wellington ethnic/age distribution	21
C&C DHB population of different iwi	21
C&C DHB population of different iwi	21
Age distribution by iwi	21
Average household income by iwi.....	21
Qualifications by iwi	21
TLA populations and NZ Deprivation Index.....	21
Maori deprivation.....	21
Pacific deprivation.....	21
Other deprivation.....	21
Ethnic composition of NZDep - Kapiti.....	21
Ethnic composition of NZDep - Porirua.....	21
Ethnic composition of NZDep - Wellington.....	21
Percentage of ethnic groups born overseas	21
Dependency on benefits by ethnic group.....	21
% of workforce fully employed by TLA and ethnic group	21
Percentage of households with telephones.....	21
PHO Population coverage in C&C DHB District	21
General medical practitioners in C&C DHB by location per 100,000 population, December 2003	21
Gender of medical practitioners in general practice in C&C DHB by location, December 2003.....	21
Retinal screening volumes C&C DHB.....	21
Childhood immunisations - % fully immunised	21
C&C DHB pharmacy subsidies 1999-2003.....	21
Community laboratory volumes	21
No clients and average hours per client – Cancer support services	21
Estimated prevalence of mental health problems amongst New Zealanders.....	21
% total mental health funding by service area.....	21
% inpatient mental health funding by service	21
Rolling 12-month totals - services provided to C&C DHB residents by any provider	21
Rolling 12-month totals - services provided to C&C DHB residents by C&C DHB provider	21

Hospital discharges by deprivation, C&C DHB, 2002/03	21
Hospital discharges by age and deprivation, C&C DHB, 2002/03.....	21
Unavoidable discharges by age and deprivation, C&C DHB, 2002/03.....	21
Avoidable discharges by age and deprivation, C&C DHB, 2002/03	21
ED attendances by ethnicity, C&C DHB, 2002/03	21
ED attendances by age & ethnicity, C&C DHB, 2002/03.....	21
ED attendances by deprivation, C&C DHB, 2000/01-2002/03	21
Patients waiting more than six months for access review.....	21
Number of patients who are offered publicly funded treatment and wait longer than six months.....	21
Expenditure for 2002/03 – 2003/04	21
Pacific nurses in C&C DHB Hospital & Health Services	21
Pacific workforce across community providers in C&C DHB	21
Trends in mortality rates by cardiovascular condition, C&C DHB 1988-2000.....	21
Cardiovascular mortality rates by age & gender, C&C DHB 2000	21
Morbidity rates by condition, C&C DHB 2000/01 – 2002/03.....	21
Angina discharges by age and ethnicity 2000/01-2002/03	21
Stroke discharges by age and ethnicity 2000/01-2002/03	21
Trends in stroke discharges compared to National rates	21
Trends in repeat discharges for Stroke age 55 and over	21
Myocardial Infarction discharges by age and ethnicity 2000/01-2002/03	21
Trends in discharges for Acute myocardial infarction compared to national	21
Heart Failure discharges by age and ethnicity 2000/01-2002/03.....	21
Chronic rheumatic heart disease standardised discharge ratios.....	21
Volume and cost to DHB of lipid modifying agents, C&C DHB, 2001-2004	21
Cancer mortality rates and proportion of all deaths, C&C DHB, 1988-2000	21
Cancer deaths by site, C&C DHB 1988-2000	21
Trends in cancer mortality 1988-2000.....	21
Trends in cancer mortality by site, C&C DHB, 1988-2000.....	21
Standardised discharge ratios for prostate cancer 2000/01 - 2002/03	21
Trends in cancer registrations, C&C DHB, 1991-2000	21
Women screened in the previous 36 months, C&C DHB, Jul-Sep 2001	21
Women screened in the previous 36 months by ethnicity, Jul-Sep 2001	21
Diabetes mortality, C&C DHB compared to NZ, 1988-2000.....	21
Diabetes mortality by TLA, 25+ years, 1998-2000.....	21
Diabetes mortality by TLA, 50-74 years, 1998-2000	21
Diabetes morbidity by TLA, 25+ years, 2000/01 - 2002-03	21
Diabetes morbidity by TLA, 50-74 years, 2000/01 - 2002/03.....	21
SDRs for Vitrectomy for people with diabetes	21
SDRs for lower limb amputation for people with diabetes	21
Diabetes pharmaceuticals by total subsidy, C&C DHB, 2001-2004.....	21
Prevalence of cigarette smoking by ethnicity, 15+ years, 1990-2002	21
Percentage meeting lipid guideline, 15+ years.....	21
Trends in suicide mortality rates by gender, C&C DHB, 1988-2000	21
Suicides by age and ethnicity 2000.....	21
Suicides by age and TLA 2000.....	21
Discharge rate for intentional self-harm 2000/01	21

Suicide deaths for youth aged 15-24 years by TLA, 1992-2000	21
Trend in respiratory discharges by condition 2000/01-2002/03.....	21
Standardised discharge ratios for respiratory infections 2002/03	21
Standardised discharge ratios for asthma 2002/03	21
Standardised discharge ratios for CORD 2002/03	21
Respiratory by total subsidy, C&C DHB 2001-2004	21
Prevalence of mental disorders by gender	21
Alcohol & Drug services - clients seen per 10,000 population, C&C DHB 2003	21
Alcohol & Drug services - contacts per 10,000 population, C&C DHB 2003	21
Avoidable dental discharges by age and ethnicity, 2000/01-2002/03.....	21
Avoidable dental discharges by deprivation and age, 2000/01-2002/03.....	21
Standardised discharge ratios for pneumonia, 0-14 years, 2000/01 – 2002/03.....	21
Standardised discharge ratios for asthma, 0-14 years, 2000/01 – 2002/03.....	21
Percentage of children failing school entry hearing screening test	21
Discharge rate per 1000 children for Injuries - children under 5	21
Discharge rate per 1000 children for Injuries - children 5 – 14	21
Preventable hospitalisations per 1000 children – children under 5	21
Preventable hospitalisation per 1000 children – children 5 – 14 years	21
Ambulatory-sensitive hospitalisations per 1000 children – children under 5	21
Ambulatory sensitive hospitalisations per 1000 children – children 5 – 14 years.....	21
Cellulitis discharges, 1-14 years, 1996-2002	21
Cellulitis discharges by ethnicity, C&C DHB, 2000/01-2002/03.....	21
Cellulitis discharges by deprivation quintile, C&C DHB, 2000/01-2002/03	21
Discharge rate per 1000 teenagers – teenage pregnancies, 13-17 years, C&C DHB.....	21
Termination of pregnancy rate per 1000 teenagers, 13-19 years, C&C DHB 2002	21
Cancer mortality rates and proportion of all deaths, C&C DHB, 1988-2000	21
Diabetes mortality by TLA, 50-74 years, 1998-2000	21
Discharge rate per 1000 population – preventable hospitalisations 65-74 years	21
Discharge rate per 1000 population – ambulatory sensitive hospitalisations 65-74 years.....	21
Discharge rate for falls, C&C DHB 2000/01 – 2001/02	21
Falls discharges by TLA, 2000/01 – 2001/02.....	21
Maori deprivation distribution, C&C DHB, 2001	21
Angina discharges by age and ethnicity 2000/01 - 2002/03	21
Myocardial Infarction discharges by age and ethnicity 2000/01 - 2002/03	21
Heart Failure discharges by age and ethnicity 2000/01 - 2002/03.....	21
Standardised discharge ratios for breast cancer 2000/01 – 2002/03	21
Standardised discharge ratios for lung cancer 2000/01 – 2002/03	21
Women screened in the previous 36 months by ethnicity, Jul-Sep 2001	21
SDRs for lower limb amputation for people with diabetes	21
Smoking prevalence by ethnicity, 15+ years, 1990-2002	21
Suicides by age and ethnicity 2000.....	21
Standardised discharge ratios for respiratory infections 2002/03	21
Standardised discharge ratios for asthma 2002/03	21
Standardised discharge ratios for CORD 2002/03	21
Estimate Of The Capital & Coast District Disabled Population	21
Standardised discharge ratios for pneumonia, 0-14 years, 2000/01 – 2002/03.....	21

Standardised discharge ratios for asthma, 0-14 years, 2000/01 – 2002/03	21
Percentage of children failing school entry hearing screening test	21
Discharge rate per 1000 children for Injuries - children under 5	21
Preventable hospitalisations per 1000 children – children under 5	21
Ambulatory-sensitive hospitalisations per 1000 children – children under 5	21
Ambulatory sensitive hospitalisations per 1000 children – children 5 – 14 years, 2003.....	21
Cellulitis discharge rate by ethnicity, 1-14 years, C&C DHB 2000/01-2002/03	21
Discharge rate per 1000 teenagers – teenage pregnancies, 13-17 years, C&C DHB.....	21
Termination of pregnancy rate per 1000 teenagers, 13-19 years, C&C DHB 2002	21
Pacific deprivation distribution, C&C DHB 2001	21
Angina discharges by age and ethnicity 2000/01 - 2002/03	21
Stroke discharges by age and ethnicity 2000/01 - 2002/03	21
Myocardial infarction discharges by age and ethnicity 2000/01 - 2002/03.....	21
Heart Failure discharges by age and ethnicity 2000/01 - 2002/03.....	21
Women screened in the previous 36 months by ethnicity, Jul-Sep 2001	21
Standardised discharge ratios for diabetes 2002/03	21
SDRs for Vitrectomy for people with diabetes	21
SDRs for lower limb amputation for people with diabetes	21
Prevalence of cigarette smoking by ethnicity, 15+ years, 1990-2002	21
Suicides by age and ethnicity 2000.....	21
Standardised discharge ratios for respiratory infections 2002/03	21
Standardised discharge ratios for asthma 2002/03	21
Standardised discharge ratios for CORD 2002/03	21
SDRs for pneumonia, 0-14 years, 2000/01 – 2002/03	21
SDRs for asthma, 0-14 years, 2000/01 – 2002/03	21
Percentage of children failing school entry hearing screening test	21
Discharge rate per 1000 children for Injuries - children under 5	21
Preventable hospitalisations per 1000 children – children under 5	21
Preventable hospitalisation per 1000 children – children 5 – 14 years	21
Ambulatory sensitive hospitalisations per 1000 children – children under 5	21
Ambulatory sensitive hospitalisations per 1000 children – children 5 – 14 years.....	21
Cellulitis discharge rates, 1-14 years, C&C DHB 2000/01 – 2002/03.....	21
Discharge rate per 1000 teenagers – teenage pregnancies, 13-17 years	21
Termination of pregnancy rate per 1000 teenagers, 13-19 years, C&C DHB 2002	21
Trend in life expectancy by gender, NZ, 1950-2002.....	21
Mortality by age and gender, C&C DHB 1988-2000	21
Hospital discharge rates for injury by gender & age, C&C DHB, 2002/03.....	21
Cardiovascular mortality rates by age & gender, C&C DHB 2000	21
Discharge rate for intentional self-harm 2000/01	21

Tables

DHB Planning and Funding cycle	12
Components of NZDep01	21
Total C&C DHB population, census 2001	21
C&C DHB population by age groups.....	21
Percentage of children living in deprived areas	21
Weighted average deprivation of children by TLA.....	21
Deprivation levels of children by ethnic group.....	21
Areas with more than 30% immigrants	21
Mean persons per household and persons per bedroom	21
Mean household income by TLA	21
Mean household income by ethnic group and TLA.....	21
Dependency on benefits by TLA	21
% of workforce fully employed.....	21
Areas of low employment	21
% of people with no qualifications.....	21
Areas with low access to phones	21
% of households with access to a motor vehicle	21
Water source and treatment plant public health grading.....	21
Water distribution system public health grading.....	21
PHO Coverage of High Needs Population in C&C DHB District	21
Age Groups and Gender Coverage for PHOs	21
Diabetes case detection rate, C&C DHB, 2002-2003	21
Diabetes case management, C&C DHB, 2002-2003	21
No. of subsidised beds per head of elderly population	21
Average occupancy for 2003/04 YTD	21
Hospice services – clients by gender	21
Hospice services – clients by ethnicity.....	21
Clients by ethnicity – cancer support services	21
Clients by location – cancer support services	21
Pacific workforce in C&C DHB.....	21
Leading causes of mortality and morbidity in C&C DHB	21
Angina standardised discharge ratios 2002/03	21
Stroke standardised discharge ratios 2002/03.....	21
Myocardial infarction standardised discharge ratios 2002/03	21
Heart failure standardised discharge ratios 2002/03	21
Cardiovascular avoidable hospitalisations, 2002/03	21
Standardised discharge ratios for breast cancer 2000/01 – 2002/03	21
Standardised discharge ratios for colo-rectal cancer 2000/01 - 2002/03	21
Standardised discharge ratios for lung cancer 2000/01 - 2002/03.....	21
C&C DHB cancer registration rates compared with NZ rates, 2000.....	21
Standardised registration ratios, C&C DHB, 1998-2000	21
Breast cancer screening, C&C DHB, 2001/02	21
Breast cancer screening, C&C DHB, 2002/03	21
Standardised discharge ratios for diabetes 2002/03	21
Smoking prevalence by gender and ethnicity, 14-15 years, 2002.....	21

Percentage overweight or obese by ethnicity and gender, 15+ years.....	21
Percentage overweight or obese by ethnicity and gender, 5-14 years	21
Levels of physical activity among young people in New Zealand	21
Levels of physical activity among adults in New Zealand.....	21
Rates per 100,000 population of disease notifications, 2001-2003	21
Suicide deaths by age and sex, C&C DHB and NZ, 1997-2001	21
Hospitalisation for intentional self harm by gender, C&C DHB 2000/2001	21
Estimate of the Capital & Coast District Disabled Population.....	21
Estimate of unmet need for at least one type of health service for C&C DHB disabled population (Adapted from Disability Counts 2001)	21
Capital support packages by level of care.....	21
Percentage of three year olds failing hearing tests by ethnicity, 2000/01	21
Oral health status of 5 year old children in C&C DHB, 2003.....	21
Oral health status of 12 year old children in C&C DHB, 2003.....	21
Mortality from unintentional injury in children 0-14 years, 1996-2000	21
Hospitalisations for injury due to violence, 0-14 years, 2000/01 – 2002/03.....	21
Capital Support weekly budget 50+ age group	21
Falls recorded in inpatient data, C&C DHB 2000/01 – 2001/02	21
Discharges for falls 2000/01 – 2001/02.....	21
Angina standardised discharge ratios 2002/03	21
Myocardial infarction standardised discharge ratios 2002/03	21
Heart failure standardised discharge ratios 2002/03	21
Standardised registration ratios C&C DHB 1998-2000	21
Breast cancer screening 2001/2002	21
Breast cancer screening 2002/2003	21
Diabetes standardised discharge ratios 2002/03	21
Smoking prevalence (%) by gender and ethnicity, 14-15 years, 2002	21
Percentage overweight or obese by ethnicity and gender, 15+ years.....	21
Percentage overweight or obese by ethnicity and gender, 5-14 years	21
Percentage of three year olds failing hearing tests by ethnicity, 2000/01	21
Oral health status of 5 year old children in C&C DHB, 2003.....	21
Oral health status of 12 year old children in C&C DHB, 2003.....	21
Hospitalisations for injury due to violence, 0-14 years, 2000/01 – 2002/03.....	21
Stroke standardised discharge ratios 20002/03	21
Myocardial infarction standardised discharge ratios 2002/03	21
Heart failure standardised discharge ratios 2002/03	21
Standardised discharge ratios for breast cancer 2000/01 – 2002/03	21
Ethnic variation in cancer registration rates C&C DHB 1998-2000	21
Breast screening 2001/2002.....	21
Breast screening 2002/2003.....	21
Smoking prevalence (%) by gender and ethnicity, 14-15 years, 2002	21
Percentage overweight or obese by ethnicity and gender, 15+ years.....	21
Percentage overweight or obese by ethnicity and gender, 5-14 years	21
Levels of physical activity among young people in New Zealand	21
Levels of physical activity among adults in New Zealand.....	21

Estimate of unmet need for at least one type of health service for C&C DHB disabled population (Adapted from Disability Counts 2001)	21
Percentage of three year olds failing hearing tests by ethnicity, 2000/01	21
Oral health status of 5 year old children in C&C DHB, 2003.....	21
Oral health status of 12 year old children in C&C DHB, 2003.....	21

Introduction

Objectives

The objective of updating the Health Needs Assessment is to produce a document that can be used for planning and decision-making. This document should:

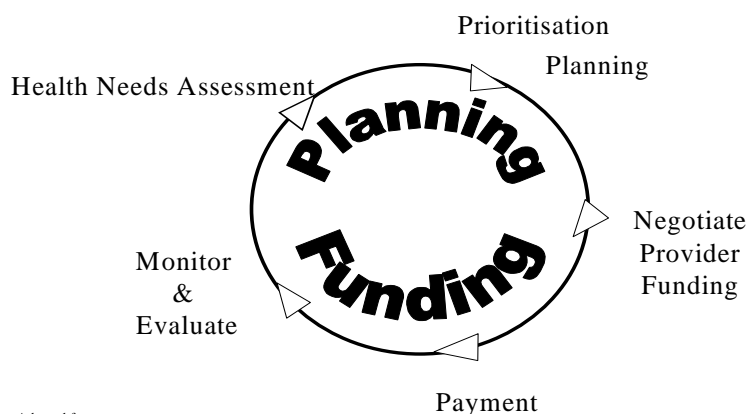
- 1 Provide information and background to be used in planning, prioritisation, decision making, and negotiation. It will facilitate discussion on where changes in resources could be beneficial. These may be gaps (or duplications) in the current mix of services provided, inequalities in health status or inequalities in access to services already provided.
- 2 Inform the community and provide a basis for consultation. Some communities may also use it as a basis to develop their own programmes for their communities.

Scope

The diagram below shows where Needs Assessment fits in the cycle of DHB planning and funding processes. This illustrates that a Needs Assessment is to inform the prioritisation and planning processes. (These two processes have been shown together as they are closely interlinked.) The Summary of gaps chapter of this Needs Assessment identifies broad areas of need and service priorities, but these will be further refined through the planning and prioritisation processes. These processes will involve more detailed analysis in some areas and also consider any obligations within which the DHB must operate including the Service Coverage Schedule, National Service Frameworks, Operational Policy Framework, Ring-fencing, National Strategies and other Ministry of Health agreements.

Note that a Health Needs Assessment is not meant to be an evaluation of current services or purchasing strategies.

DHB Planning and Funding cycle



Adapted from
Health Needs Assessment for New Zealand:
An Overview and Guide. MoH, 2000.

This Health Needs Assessment, the second undertaken by Capital & Coast DHB is descriptive in style rather than evaluative. It describes the District's populations, a stocktake of the

current contracted services and utilisation of those services, information on health workforce (where available), and an in-depth analysis of priority health areas.

Health services are funded by the DHB under various portfolios – personal health, mental health, aged care and disability support services, and secondary/tertiary care. For some areas, such as aged care and disability services and mental health, data is not comprehensive. In personal health, there is good data for mortality and hospital in-patient services, but utilisation data for primary care services is still not available at a population level. Public health services are mainly contracted by the Ministry of Health. Areas for further development in the future have been identified throughout the document, and in the chapter on Data and Methods.

Structure

The first chapter, *Executive Summary*, is a high-level summary of the whole Health Needs Assessment.

The *Data and Methods* chapter outlines the planning context for the Health Needs Assessment, and defines the main measures of health status used. Avoidable mortality, the deprivation index, and data issues are discussed here.

Population and determinants of health details the basic demographics of the residents of the Capital & Coast District including deprivation. Life expectancy and mortality are included in this section.

The *Current Services* chapter summarises the type and volume of services currently contracted for each portfolio and high-level utilisation of those services. The following *Priority Areas* chapter then looks at priority areas in some detail.

Chapters on *Maori* and *Pacific* provide summaries of the needs assessments for these specific population groups who have been identified as groups with high health needs.

The chapter on *Gender Issues* identifies areas where there are significant differences in health status or outcomes between genders.

Summary of gaps attempts to identify areas where there is particular need and where changes in resources could be beneficial. This is done by identifying population groups with high health need, conditions with a high burden of disease and other issues affecting health and wellbeing.

Chapter 1: Executive Summary

This Health Needs Assessment, the second undertaken by Capital and Coast DHB will provide a basis for the development of the revised District Strategic Plan and will input into all planning and prioritisation processes. It can be used at all levels of decision making and to inform the community and provide a basis for consultation. In addition it may be used by some communities as a basis to develop their own programs to encourage health and wellbeing.

1.1 Population

This document has identified several key characteristics of the population of the Capital and Coast district that will influence the planning and funding of health services, namely that:

The district population is ageing.

Life expectancy continues to increase.

82.5% of the district population are in the Other ethnic group, 9.9% are Maori and 7.6% are Pacific.

There are three distinctly different TLAs within the Capital and Coast district:

- Kapiti has a low percentage of people aged 15-45 and a high number of people over 60. The population is dominated by the Other ethnic group who make up 90% of the population. The Maori and Pacific ethnic groups are composed of mainly children and younger adults. The majority of the Kapiti population live in NZDep 3 to 7 areas.
- Porirua has a high percentage of children under 15 and lower than the national average of people over 60. 23% of the population are Maori and 20% are Pacific people. The Maori and Pacific populations are young in comparison to other ethnicities. 37% of the Porirua population live in areas classified as NZDep 10 and 29% live in NZDep 1 areas.
- Wellington has a high percentage of people aged 20-40 and a low percentage of people in the under 15 and over 60 age groups. Almost 90% of the population are people in the Other ethnic group. The Maori and Pacific populations are relatively small, with very few people aged over 60. 26% of Wellington's population live in the least deprived areas (NZDep 1).

Within the Capital and Coast district there are several population groups with particular health needs. For more information on the specific needs within these groups see chapter 9. The population groups with particular needs are:

Maori, Pacific, and people from areas of high deprivation - In general people from these groups have lower life expectancy, high mortality and morbidity rates (avoidable as well as unavoidable), and high emergency department presentations. On average they also develop chronic conditions such as cardiovascular disease and diabetes up to 25 years earlier than people from other groups.

Older People and children – These two groups have higher morbidity rates than the population as a whole, and some subgroups of these groups have particularly high use of health services. The health of Pacific children is of particular concern.

People with disabilities, refugees, and people with severe mental health conditions.

1.2 Priority conditions

Several conditions have been analysed in detail. These include the conditions that have the greatest impact in the region in terms of burden of disease. Once again see chapter 9 for more information on the specific needs within these groups. These conditions include:

Cardiovascular conditions – These cause the greatest burden of disease in New Zealand and the leading cause of death for people aged 40 and over. One third of avoidable deaths are from cardiovascular conditions.

- Males die from cardiovascular conditions earlier than females.
- They affect Maori and Pacific people at an earlier age than people of other ethnicities.
- Deaths from ischaemic heart disease are declining at an average rate of 4.4% a year.
- Angina discharges decreased almost 30% over last three years.
- Myocardial infarction morbidity is increasing at an average rate of 4.3% a year.
- Stroke is a particular problem for Pacific people, who have 2 to 3 times the district rate of morbidity.
- Heart failure is a particular problem for both Maori and Pacific people, with 2½ to 3½ times the district rate of morbidity. Pacific people living in Porirua have a particularly high rate.

Cancer – The second largest burden of disease in New Zealand. 47% of avoidable deaths in the district are due to cancer.

- The rate of cancer registrations for C&C DHB is slightly lower than the national rate at 4.4 per thousand of population compared to 4.7 per thousand.
- Registrations of breast cancer have increased at an average rate of 4% a year.
- Prostate cancer registrations have seen a dramatic increase, tripling in the years from 1991 to 2000.
- In the years from 1991 to 2000, lung cancer registration rates decreased by 4%.
- Maori women have a breast cancer admission rate 40 to 55% higher than the district rate.
- Maori living in Wellington have a lung cancer admission rate twice the district rate and Maori living in Porirua have 3 times the district rate.
- The Other ethnic group have 48 to 60% more admissions for colo-rectal cancer than the district as a whole.

Respiratory conditions – Respiratory conditions are the fifth most significant health issue as measured by burden of disease, but are the third most significant issue for Maori.

- Respiratory conditions are the leading cause of avoidable hospitalisation for children under 15 years.
- Deaths from respiratory conditions have declined at an average rate of 4% a year from 1988 to 2000.

- For Pacific people living in Wellington, the morbidity rate from respiratory conditions is 3 times the rate of the district as a whole, and for those living in Porirua it is 2½ times the district rate.
- Maori also have high morbidity rates for respiratory infections.
- Asthma and COD are big issues for both Maori and Pacific people. In some areas the morbidity rates for these groups are more than twice the district rate. People of other ethnicities living in Porirua also have a high morbidity rate for COD.

Diabetes – This condition is a significant cause of poor health and premature death. The mortality rate from diabetes has been increasing rapidly and the district rate has now passed the national rate.

- Diabetes mortality increased at an average rate of 9% a year from 1988 to 2000.
- Diabetes is a particular problem for Maori and Pacific people.
- Diabetes affects relatively more people in Porirua than other TLAs and at an earlier age.
- Pacific people living in Porirua have nearly 5 times the district rate of diabetes morbidity.
- Maori living in Porirua have over 4 times the district rate of diabetes morbidity.
- Pacific people living in Wellington have over 3 times the district rate of diabetes morbidity.

1.3 Other issues affecting health and wellbeing

Age and gender are two major determinants of health. In addition there are numerous other issues that affect the health and wellbeing of the population. Many of these issues are such that they cannot be directly impacted by the health sector and hence underline the importance of multiple, interlinked, inter-sectoral approaches to addressing determinants of health. These issues include amongst others:

Income, income support, employment

Access to transport and telephones

Education

Housing

Access to current services

Smoking

Nutrition

Obesity and overweight

Physical activity

Provider capacity

Lack of integration of services

1.4 Changes since the last Health Needs Assessment

The majority of trends in this Health Needs Assessment are similar to the previous one. Differences are:

Diabetes mortality continues to increase, but the rate of increase is down from 12% per year to 9%. The C&C DHB rate has now passed the national rate.

Cardiovascular mortality continues to decrease, but hospital discharge rates for some conditions have changed:

- The increase in the discharge rate for acute myocardial infarctions is now 4.3%, up from 1%.
- The discharge rate for heart failure is now decreasing where it was previously increasing.
- The discharge rate for angina has decreased by almost 30% over the last 3 years where previously it was increasing.
- The discharge rate for stroke is now steady where previously it was decreasing.

1.5 Areas of particular concern

Areas identified in this Health Needs Assessment as being of particular concern and affecting a reasonable number of people are (in no particular order of priority):

The health of Pacific children.

Cardiovascular disease especially for Maori, Pacific, people from areas of high deprivation, and males.

Prostate cancer.

Lung cancer in Maori.

Colo-rectal cancer in people of Other ethnicity.

Access to primary care services especially for Maori, Pacific, people from areas of high deprivation and males.

Respiratory conditions especially for Maori, Pacific, people from areas of high deprivation, and children.

Diabetes especially for Maori, Pacific, and people living in Porirua.

Access to services for Maori, Pacific, and people from areas of high deprivation.

Mental Health.

Chapter 2: Data and Methods

This chapter sets out the formal context for Health Needs Assessment by District Health Boards, and outlines the approach we have chosen for Capital & Coast DHB.

Data coverage and quality are discussed along with the analytical methods used.

2.1 Background: Ministry and legislative guidelines

The New Zealand Public Health and Disability Act 2000 requires District Health Boards (DHBs) to improve, promote and protect the health of the people and communities in their region. The Act notes that one of the functions of DHBs is:

To regularly investigate, assess, and monitor the health status of its resident population, any factors that the DHB believes may adversely affect the health status of the population, and the needs of that population for services (Clause 23(1)(g)).

The Ministry of Health's "Guide" to DHBs on Health Needs Assessment¹ states that

This process will be done through health needs assessments that will provide DHBs with a wide range of information about their resident populations to help them make funding decisions. Health needs assessments will be a key input into both DHBs' strategic plans and annual plans.

...

Health needs assessments provide the evidence that will underpin DHBs' purchasing decisions and should give:

a view of the services required by the population

available services

gaps in current service provision

strategies to meet those gaps

This evidence will go into DHBs' prioritisation processes. On the basis of this evidence, DHBs will produce strategic and annual plans outlining how they intend to purchase and develop services to meet needs.

2.2 Health Needs Assessment and DHB planning

The goal of all of Capital & Coast's planning and decision making processes is to ensure that the most important and effective health services are funded. Health Needs Assessment is a critical input to this.

Health Needs Assessment has three important roles. Firstly, it identifies areas where changes in resources could be beneficial. A case for increased or more effective resources is indicated by health need, relative under-servicing and 'avoidable morbidity and mortality'. It may also indicate areas of relative over-servicing and waste that could provide funds for other activities.

¹ Ministry of Health 2000

Secondly, Health Needs Assessment provides data that is needed by the prioritisation and decision making process.

Thirdly, it informs the community and provides a basis for consultation.

2.3 Choice of Health Needs Assessment methods

In terms of the formal approaches to Health Needs Assessment set out in the Ministry of Health's guidelines², this assessment uses a mixture of the "Global", "Epidemiological", and "Comparative" approaches.

It is *comparative* in that the key marker of whether service levels are appropriate is comparisons between Wellington, Porirua, Kapiti, and the rest of the country. It is *epidemiological* in its focus on the main conditions that affect people, and *global* in its division by major health services and its links to the New Zealand Health Strategy.

2.4 Measuring health needs

A literal approach to Health Needs Assessment focuses on the conditions of highest health need for each region. To do this, we need a common measure that can be used to compare conditions as diverse as depression, diabetes, and death. Ideally the measure should reflect society's values, both in terms of preferences between different states and kinds of health, and across different age groups.

Unfortunately the data for the ideal measures is rarely available. This Needs Assessment therefore uses a range of measures to assess health need. The main measures of outcome used are burden of disease, avoidable morbidity, avoidable mortality, and total mortality. "Expressed demand" is measured by relative use of services. Known indicators of health status are also used, especially the New Zealand Index of Deprivation, "NZDep01"³.

2.4.1 Avoidable mortality and morbidity

The main measures of health need used in this Needs Assessment are mortality and morbidity, and within these avoidable mortality and morbidity.

Mortality is simply the number of deaths. Deaths are grouped by cause, and located by residence.

Morbidity is measured by discharges from hospitals. It therefore picks up the more severe effects of any health condition. Its limitation is that it gives a very low weighting to the long term chronic conditions (such as depression and arthritis) that may have very high effects on self-perceived health status. It also omits primary care treatments. Its advantage is that nationally consistent hospital discharge data has been collected for over 15 years.

Morbidity can be divided into four categories: 'unavoidable' and three types of 'avoidable' events. The categories of avoidable hospitalisations are:

Ambulatory sensitive hospitalisations are hospitalisations for conditions that are sensitive to prophylactic or therapeutic interventions delivered in a primary health care setting. An example would be the early diagnosis and control of diabetes.

² Coster 2000

³ Salmond & Crampton 2000

Preventable hospitalisations result from diseases preventable by population-based health promotion strategies such as smoking cessation.

Injury preventable hospitalisations.

2.4.2 Access

It should be noted that health need measured in this document by morbidity, does not take into account variations in access to services by various groups in the community. This may mean that the picture of health needs shown is not complete for any population groups who may require services, but are not currently getting them. It has been shown for example that health care utilisation by Maori is not proportional to the expected higher need⁴, based on known poor health status. This suggests that there are access issues for Maori compared to other New Zealanders. There are many questions with regard to access and need for services that have yet to be answered including, what if any is the impact of access on cancer survival rates and mortality rates.

There is either hard or soft evidence of variation in access to services for different population groups by gender, ethnicity, and deprivation. Some issues affecting access are:

Financial barriers – In particular Maori, Pacific, refugees and migrants have lower median incomes (see chapter 3 section 3.10).

Socio –economic – Access to transport and telephones (chapter 3 sections 3.12 and 3.13).

Provider capacity – In some areas providers may not have the capacity to meet the need or demand for health services.

Cultural barriers – The cultural appropriateness of services (includes perceived attitudes of health workers and acceptability of health providers to Maori, Pacific, other ethnic groups, or population sub-groups such as youth) may influence whether people choose to access health services. It should be noted that the majority of services currently provided in New Zealand are based on European models of health care.

Language barriers – Lack of language ability prevents some people from accessing services. This may either be because they do not have the language ability or confidence to access services, or do not have local knowledge about where or how to access health services.

Education – A lack of understanding of the factors influencing health, and when it is appropriate to access health services may lead to under-utilisation of services.

Disability – People with disabilities tend to have lower levels of education, employment and income (see section 5.8.7) which influence their ability to access services. They may also have physical difficulties in travelling or accessing service facilities.

Health service factors – attitudes, knowledge and geographical distribution.

The influence of some of these issues can be captured by using the New Zealand Deprivation Index in analysis, but the influence of others cannot be measured directly. See 2.4.4 below for more information on the New Zealand Deprivation Index.

⁴ Pomare E, Keefe-ormsby V, Ormsby C, Pearce N, Reid P, Robson B et al. Hauora. Maori Standards of health III. A study of the years 1970-1991. Wellington: Te Ropu Rangahau Hauora a Eru Pomare, 1995.

2.4.3 Indicators of health status

Even when the specific health status of a given population cannot be measured directly, we can infer some information from its broader characteristics.

Four characteristics have been shown to be excellent indicators of population health status, namely:

- Age
- Gender
- Ethnicity
- Index of deprivation

Age is the strongest indicator of need for health services. Death rates increase steadily with age. Gender is the next most important: women have higher morbidity than men across their life-span due to reproductive processes, while men die at significantly younger ages.

Ethnicity has repeatedly been shown to be a strong indicator of health status. Maori and Pacific people have significantly poorer health statistics than non-Maori, non-Pacific people.

2.4.4 New Zealand Deprivation Index

A final indicator of health status is the New Zealand Index of Deprivation, "NZDep01" (Salmond & Crampton). This index brings together nine elements that are clearly linked to poor health, such as income, lack of access to transport and communications, and quality of housing. Newborn males in the 'best-off' 10% of the population have a life-expectancy that is 9 years greater than their contemporaries in the most deprived 10% of areas.

These four factors are not independent, and often additive. For example, the Porirua population includes many Maori and Pacific peoples relative to the rest of the country. The Porirua population is also younger and, in many areas, less affluent. Many of the younger women have very high fertility rates. These observations are not independent. It is therefore impossible to say that any one of these factors is in itself the primary cause of the relatively high health needs in that area.

Limitations of the Deprivation Index

The main significant problem with the Deprivation Index is that it may not adequately reflect wealth, as measured in both monetary and other terms. This could be significant for Kapiti, with its large retired population, and Porirua, which appears to have high levels of 'social capital' as indicated by social cohesion and community networks.

A second problem with the Deprivation Index is that it tends to mask the extremes in any given areas. New Zealand society is characterised by a high degree of social 'mixing'. In Wellington, council flats and state housing are located next to – or even in – relatively affluent suburbs. The Deprivation Index will often give an average across both areas.

Components of NZDep01

- | | |
|---|------------------------------------|
| Income relative to household size | Employment |
| Access to telephone | Adults receiving income support |
| Access to cars | People under 60 with single parent |
| Qualifications | Home ownership status |
| Size of house relative to number of residents | |

2.5 Data sources

The data for this Needs Assessment exercise has come from a number of sources.

The core mortality and morbidity data/statistics, including the algorithms for avoidable events, were provided by the Ministry of Health. It should be noted that morbidity data came from both the National Minimum Data Set (NMDS) and the hospital arm of Capital and Coast DHB, so there may be some variation in hospitalisation rates.

Data on discharges from public hospital emergency department and outpatient service came from the hospital arm of Capital & Coast DHB.

Demographic data was sourced from Statistics NZ, most of it via the Ministry of Health. Data on life expectancy for Capital & Coast DHB was provided by Central Region Technical Advisory Services (TAS), and independent life expectancy data was sourced from the Ministry of Health.

Information on water and air quality was provided by the Wellington Regional Council and information on parks/recreation facilities was sourced from the local councils. Data on notifiable diseases was provided by the Institute of Environmental Science and Research (ESR).

PHARMAC provided data on pharmaceutical subsidies from the PharmHouse data warehouse. Figures on community laboratory referrals came from the NZ Health Information Service's (NZHIS) laboratory data warehouse. Other sources of data were TAS, and monitoring reports supplied by other providers.

Various national surveys have been used including the National Nutrition Survey, Child National Nutrition Survey and the National Survey of Crimes Victims. Data on smoking is from Public Health Intelligence and data on physical exercise is from Sport and Recreation New Zealand. Data on child abuse is sourced from the Child Youth and Family Service (CYFS).

PHO Health Needs Assessments were referred to when preparing this document. For a full list of publications drawn on in this report refer to the bibliography.

2.6 Data gaps and quality issues

This project has highlighted once again the significant gaps in data, and problems with existing data.

There are problems of data coverage in Aged Care, Disability Support, and Mental Health. In some areas of Disability Support and Mental Health, a reluctance to 'label' and possibly stigmatise people means that very little 'diagnostic' data is collected. This makes it impossible to measure or predict, say, the number of people with dementia, even though they may have major needs for support from the

Capital & Coast ethnicity data

A comparison of health data for the three main ethnic groups in the Capital and Coast District showed that ethnicity coding is still unreliable. For example, data for children under 6 provided by PHOs was compared to data from the NZHIS NHI system. It was found that there was a 27% difference in the number of Maori children between the two data sets. It was felt that the PHO data was likely to be the more correct, as it was closest to census data.

The change in coding over time is apparent in the District's mortality data. In 1988, it records 44 deaths for Maori and 47 for Pacific Peoples. In the 2000 data, this is nearly doubled, to 97 and 81 respectively. Hence it should be noted that any analysis by ethnicity in this document should not be considered to be a completely accurate representation, but is the best currently available.

District Health Board. Available data mostly details contracts and payments rather than classifying the reasons for or the results of the service provided. Some information is collected through contract monitoring returns, but to date there have been considerable concerns with the quality of this information and hence this source of information has in general not been used when compiling this document. Another issue with most health information collected is that it does not record whether a patient lives in a rest home or not, and hence no trends are available on utilisation of services by this group of the population.

There are other areas where data is not routinely collected or available to government agencies. The district's private hospitals have not provided data on their throughput, and the national collection of such data has lapsed. PHO utilisation information is not yet available due to data collection and storage issues.

Data on nutrition, obesity and physical activity is not readily available by DHB. A national nutrition survey of adults has not been undertaken since 1997, however a Child National Nutrition Survey was carried out in 2002. Only limited smoking data is available for C&C DHB.

In Personal Health services, there is good data for mortality and for public hospital in-patient services, including the elective services waiting lists.

Chapter 3: Population and determinants of health

3.1 Overview

3.1.1 Total population

At the last census count there were 245,451 people living in the Capital and Coast district, with two thirds of the population living in Wellington city.

The district population will age over the next 5 years. Increases are expected in the 40-70 age group as well as the over 75s, and decreases are expected in the number of people aged 25 to 40.

3.1.2 Life expectancy and mortality

Life expectancy in C&C DHB is 78.5 years. For females it is 81.3 years and for males it is 75.7 years.

Maori life expectancy is shorter than non-Maori life expectancy.

In 2001, "independent life expectancy" was 64.8 years for males and 68.5 years for females.

Maori and Pacific people die earlier than people of Other ethnicity, with the highest proportion of deaths in the 45 to 64 age group.

Males have higher mortality rates than males until age 65.

The proportion of deaths that are "avoidable" is decreasing for both males and females.

3.1.3 Age and gender

Kapiti has a low percentage of people aged 15-45 and a high number of people over 60.

Porirua has a high percentage of children under 15 and lower than the national average of people over 60.

Wellington has a high percentage of people aged 20-40 and a low percentage of people in the under 15 and over 60 age groups.

From age 15 up there are more females than males in all age groups.

3.1.4 Ethnicity

82.5% of the district population are in the Other ethnic group, 9.9% are Maori and 7.6% are Pacific.

The Kapiti population is dominated by the Other ethnic group who make up 90% of the population. The Maori and Pacific ethnic groups are composed of mainly children and younger adults.

In Porirua, 23% of the population are Maori and 20% are Pacific people. The Maori and Pacific populations are young in comparison to other ethnicities.

Almost 90% of the Wellington population are people in the Other ethnic group. The Maori and Pacific populations are relatively small, with very few people aged over 60.

3.1.5 Deprivation

37% of the Porirua population live in areas classified as NZDep 10 and 29% live in NZDep 1 areas.

The Kapiti distribution is concentrated in the middle with the majority of the population living in NZDep 3 to 7 areas.

26% of Wellington's population live in the least deprived areas (NZDep 1).

19% of Maori live in the most deprived areas (NZDep 10).

45% of Pacific people in the district are living in the most deprived areas (NZDep 10).

27% of people in the Other ethnic group live in the least deprived areas (NZDep 1) and only 2% in the most deprived areas (NZDep 10).

In Porirua, 64% of all children (aged under 15) live in areas that are designated NZDep 6-10 and 56% live in areas designated NZDep 9-10.

3.1.6 Income and benefits

Mean household income is highest in Wellington and lowest in Kapiti.

Maori and Pacific people have a lower mean household income than Europeans and Asians. People of other ethnicities have the lowest mean household income.

All ethnic minority groups in Porirua, except Asians, have lower household incomes than those living in Wellington or Kapiti.

Just over 6.5% of households in the district have no income other than benefits.

11.9% of households in Kapiti, 8.9% of households in Porirua and 5% of households in Wellington have no income other than benefits.

Levels of dependency on Domestic Purposes Benefit are 5 times as high for Maori and Pacific households than for other ethnic groups.

3.1.7 Employment

For those people living in Kapiti, the percentage of the workforce fully employed is around 70% for Pacific and Other, and 63% for Maori.

For those people living in Porirua, the percentage of the workforce fully employed is 74% for Other, and 63% for Maori and Pacific.

For those people living in Wellington, the percentage of the workforce fully employed is 76% for Other, 72% for Maori and 69% for Pacific.

3.1.8 Telephone and vehicle access

Access to telephones is reasonably high across the district and across ethnic groups.

There are some census areas units, all in Porirua, with low access to telephones.

In C&C DHB between 85% and 90% of households have access to a motor vehicle.

3.2 Total population

Overall population

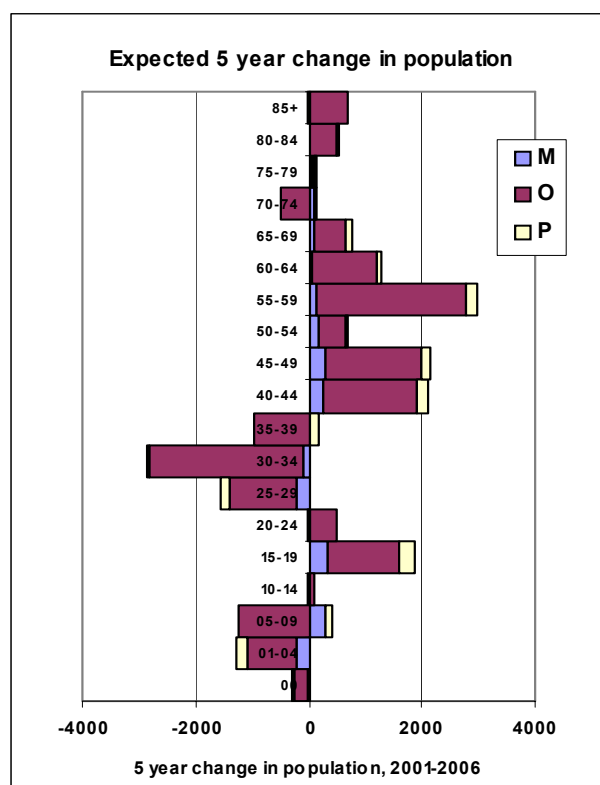
Total C&C DHB population, census 2001

Ethnic Group	count of resident population in census 2001				ethnic groups a % of TLA			
	Kapiti	Porirua	Wellington	District	Kapiti	Porirua	Wellington	District
Maori	2994	9390	11838	24222	8.7	19.8	7.2	9.9
Pacific	432	10848	7347	18627	1.3	22.9	4.5	7.6
Other	31116	27117	144369	202602	90.1	57.3	88.3	82.5
All ethnicities	34542	47355	163554	245451	100	100.0	100.0	100.0
% of total	14.1	19.3	66.6					

Data source: Statistics New Zealand

At the last census count there were 245,451 people living in the Capital and Coast district. Two thirds of the population live in Wellington. 82.5% of the district population are in the Other ethnic group, 9.9% are Maori and 7.6% are Pacific. Porirua has a large proportion of Maori and Pacific people, accounting for approximately 43% of the Porirua population. Kapiti has a high percentage of people in the Other ethnic group and a low number of Pacific people.

3.2.2 Population change



Data source: Statistics New Zealand

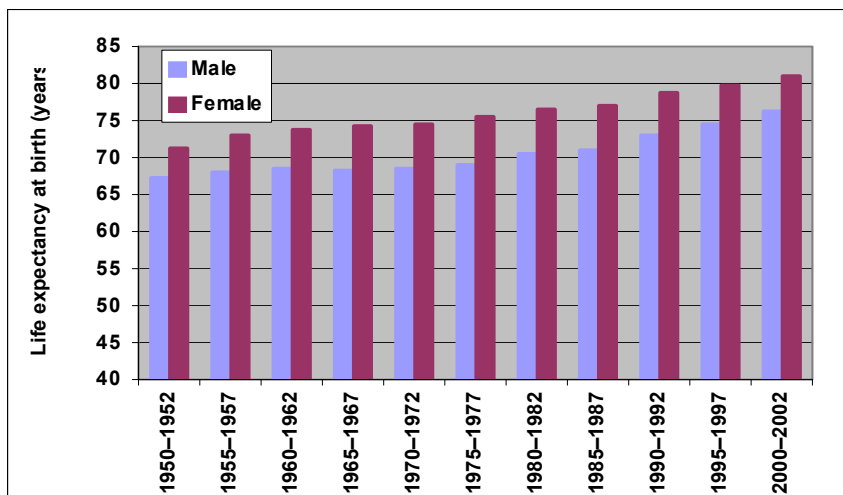
Expected 5 year change in population by age group, 2001-2006, C&C DHB

The district population is ageing. In the next five years significant increases are expected in the 40-70 year age group (13%) and in the over 75s (12%). On the other hand an 8% decrease is expected in the number of young adults aged 25-40, and the number of young children (aged under 10) is expected to decrease by 7%. The number of Maori and Pacific children aged between 5 and 10 years however, is expected to increase.

3.2.3 Life expectancy

Life expectancy for people living in the district is 78.5 years (1996-2000). Females live longer than males. Female life expectancy is 81.3 years compared to 75.7 years for males. Maori have a shorter life expectancy than non-Maori. Nationally, the life expectancy for Maori females is 73.2 years compared to 81.9 years for non-Maori females. For males, life expectancy is 69 years for Maori compared to 77.2 years for non-Maori. Figures are not available for other ethnicities. There is a trend over time toward increasing longevity, as illustrated in the graph below.

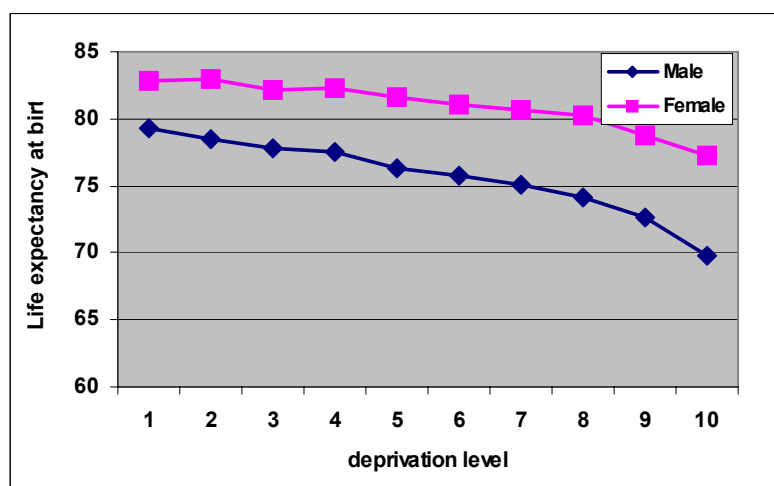
Trend in life expectancy by gender, NZ, 1950-2002



Data source: Statistics New Zealand

Male life expectancy has increased by 9.1 years over the last 50 years, from 67.2 years in 1950-1952 to 76.3 years in 2000-2002. Female life expectancy increased by 9.8 years over the last 50 years, from 71.3 years in 1950-52 to 81.1 years in 2000-2002. There is a strong correlation between deprivation and life expectancy. Life expectancy decreases with increasing deprivation. Males living in the least deprived areas (NZDep 1) can, on average, expect to live 9.5 years longer than those living in the most deprived areas (NZDep 10). Females living in the least deprived areas can, on average, expect to live 5.6 years longer than females living in the most deprived areas.

Life expectancy by gender and deprivation, NZ, 1998-2000



Data source: Ministry of Health – note deprivation level is NZDep96

3.2.4 Independent life expectancy⁵

The World Health Organisation has introduced a measure called 'healthy life expectancy', that is the number of years a person could expect to live in good health. The information required to construct this measure however, is not yet available in New Zealand. In this report "independent life expectancy" has been used as a proxy for healthy life expectancy. Independent life expectancy is defined as the number of years a person could expect to live without any functional limitation (disability) requiring the assistance of another person or complex assistive device.

In 2001, independent life expectancy was 64.8 years for males and 68.5 years for females. Independent life expectancy has increased for females since 1996 but has not improved for males.

For ethnic comparisons, only "partial (0-85) independent life expectancy" can be estimated, as there are only a small number of Maori aged over 85. These estimates show large differences between Maori and non-Maori independent life expectancy. In 2001 partial independent life expectancy was 58 years for Maori males, compared to 65.2 years for non-Maori males. The gap is even wider for females at 59 years for Maori females compared to 68.2 years for non-Maori females.

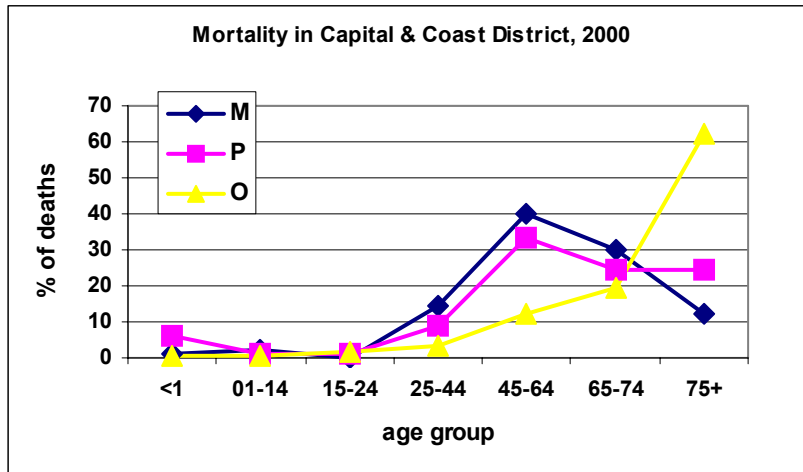
3.2.5 Mortality

Based on all deaths for people aged 25 and over in 2000, the average age of death in C&C DHB was 75. The average age of death for people aged 25 and over was 59 for Maori and 64 for Pacific, compared to 77 for Other (people aged 25 years and over). People living in very high deprivation (NZDep 10) have a lower average age of death than people at all other levels of deprivation. The average age of death for people in NZDep 10 is 56 when all age groups are included, and increases to 64 for people aged 25+ only. This shows that child and youth mortality is contributing to the young average age of death. Deprivation levels 1-9 do not show the same significant change when under 25s are excluded. The average age of death for other deprivation levels ranges from 73 to 76 years.

⁵ Data source: Ministry of Health

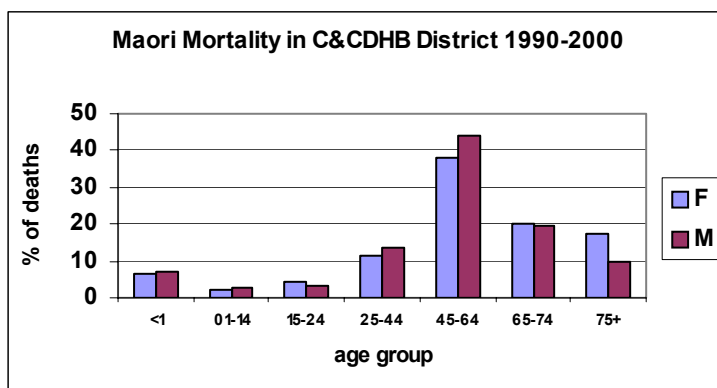
The graph below shows clearly that Maori and Pacific people die earlier than people of other ethnicities, with the highest proportion of deaths in the 45-64 age group.

Mortality by ethnicity and age, C&C DHB, 2000



Data source: Ministry of Health

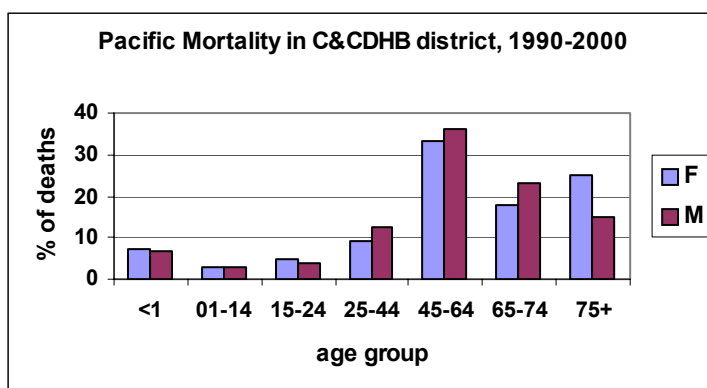
Maori mortality by age and gender, C&C DHB, 1990-2000



Data source: Ministry of Health

Up to the age of 65, Maori males have higher mortality rates than Maori females, with the exception of youth aged 15-24 for whom the rate for females is slightly higher. Maori males and females aged 65-74 have similar mortality rates. After the age of 75 females have a higher mortality rate than males.

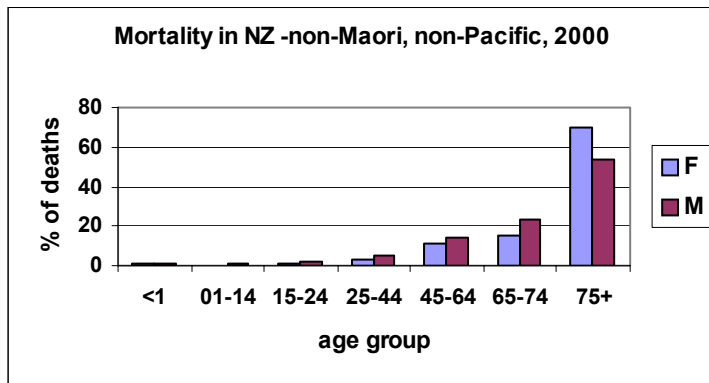
Pacific mortality by age and gender, C&C DHB, 1990-2000



Data source: Ministry of Health

For Pacific, males and females have similar mortality rates until age 25. Between ages 25 and 74 males have a higher rate than females. Females aged 75 and over have a higher mortality rate than males of the same age.

Other mortality by age and gender, C&C DHB, 2000

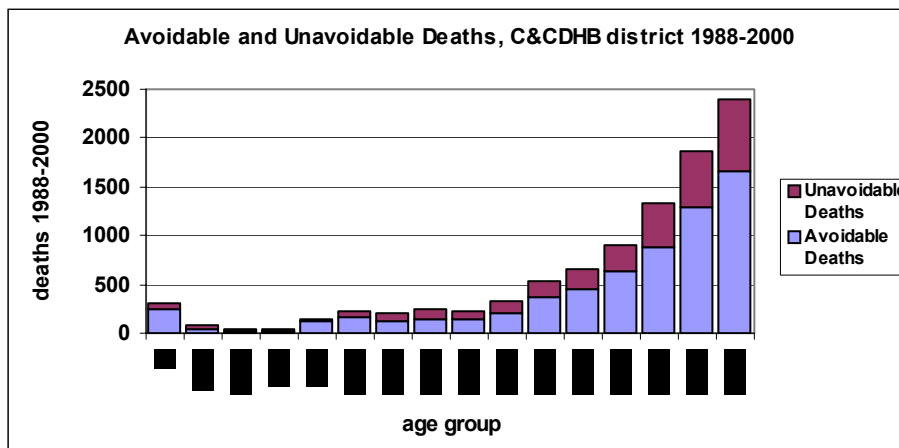


For people of other ethnicities, males have higher mortality rates than females until age 75. After that females have a higher rate.

Data source: Ministry of Health

3.2.5.1 Avoidable mortality

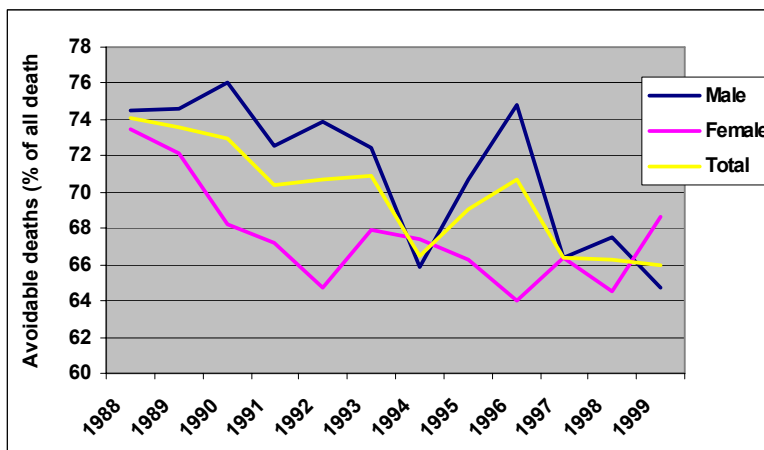
Avoidable and unavoidable deaths, C&C DHB, 1988-2000



Data source: Ministry of Health

Both avoidable and unavoidable deaths increase with age.

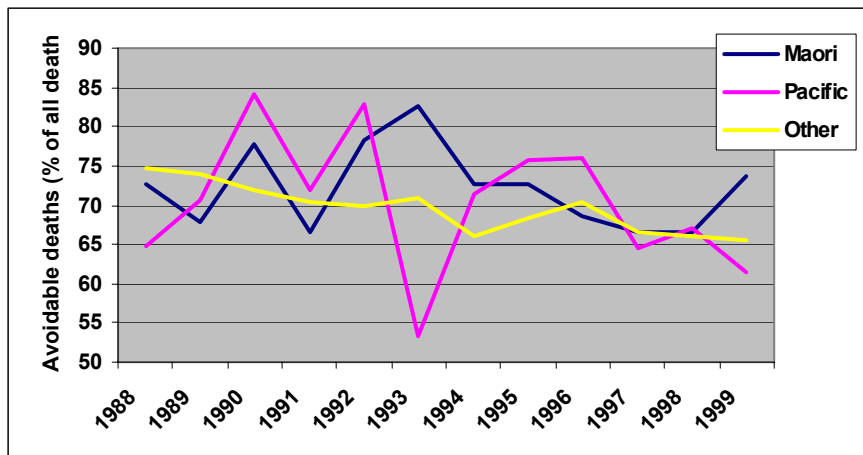
Trend in avoidable mortality by gender, C&C DHB, 1988-1999



Data source: Ministry of Health

The percentage of deaths that are avoidable is generally higher for males than for females. The proportion of avoidable mortality has decreased for both males and females over the last 11 years.

Trend in avoidable mortality by ethnicity, C&C DHB, 1988-1999



Data source: Ministry of Health

The percentage of deaths that are avoidable has decreased steadily for Other, however, it is difficult to tell if the proportion of avoidable mortality is declining for Maori or Pacific people as the percentages for these groups are fluctuating.

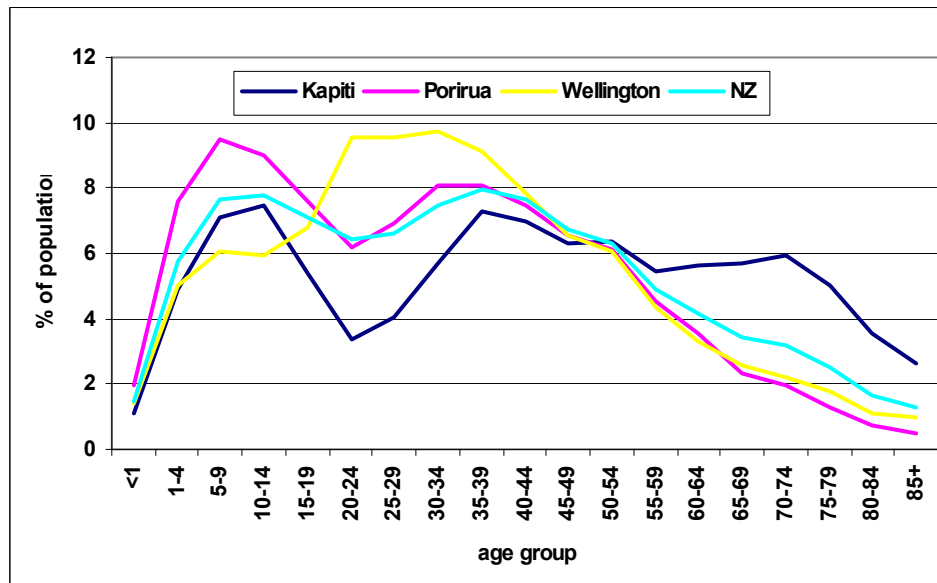
3.3 Age distribution

C&C DHB population by age groups

Age group	0-14	15-24	25-44	45-64	65+
Population	50703	36222	81996	51285	25245
Percentage	20.7%	14.8%	33.4%	20.9%	10.3%

Data source: Statistics New Zealand

Population of TLAs by age group, compared to NZ



Data source: Statistics New Zealand

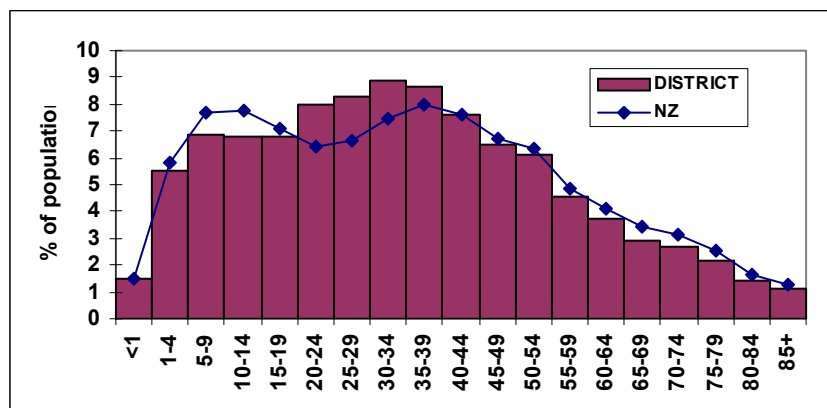
The three TLA populations differ considerably in the percentages of children, working age adults and elderly people.

Kapiti has a low percentage of people aged 15-45 and a high percentage of people aged over 60.

Porirua has a high percentage of children under 15 years and lower percentage of people aged over 60.

Wellington has a high percentage of people aged 20-40, and low percentages of children under 15, and people aged over 60.

C&C DHB district population compared with New Zealand population

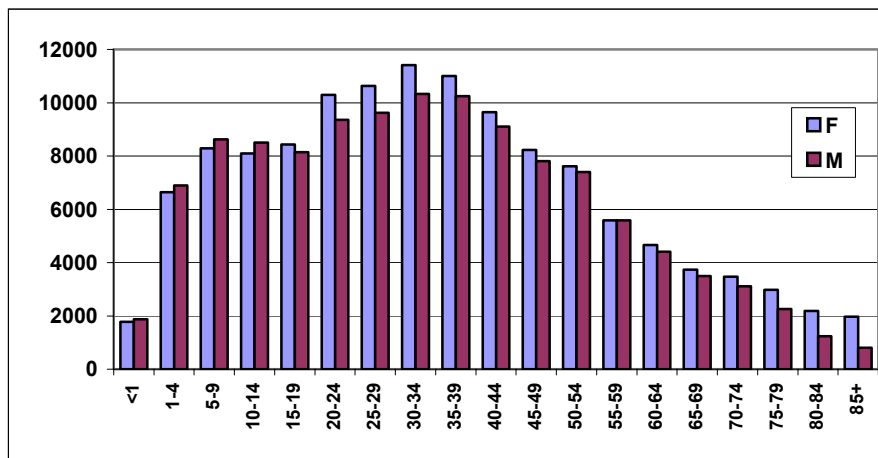


Data source: Statistics New Zealand

In comparison to the New Zealand population, the district population has a lower percentage of 10-20 year olds, considerably higher percentage of working age adults, and slightly lower percentage of people aged over 50.

3.4 Gender distribution

C&C DHB district population by age and gender

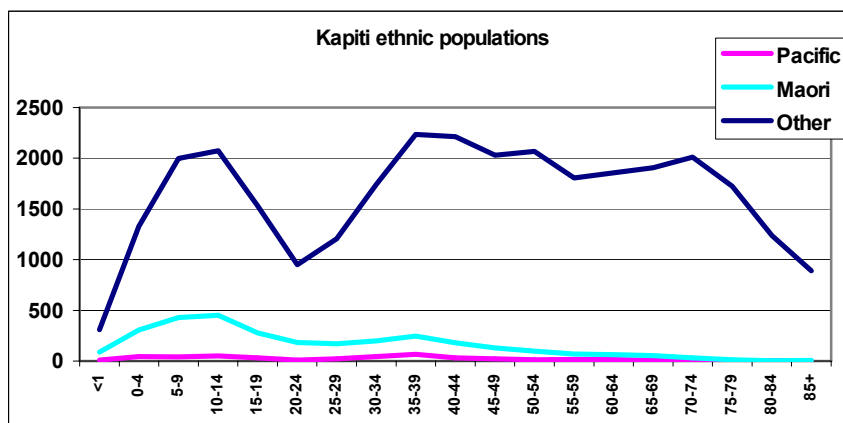


Data source: Statistics New Zealand

For children aged under 15 there are more males than females, then in all age groups from age 15 there are more females than males. Females live longer than males. There are twice as many females aged over 80 as there are males.

3.5 Ethnic distribution

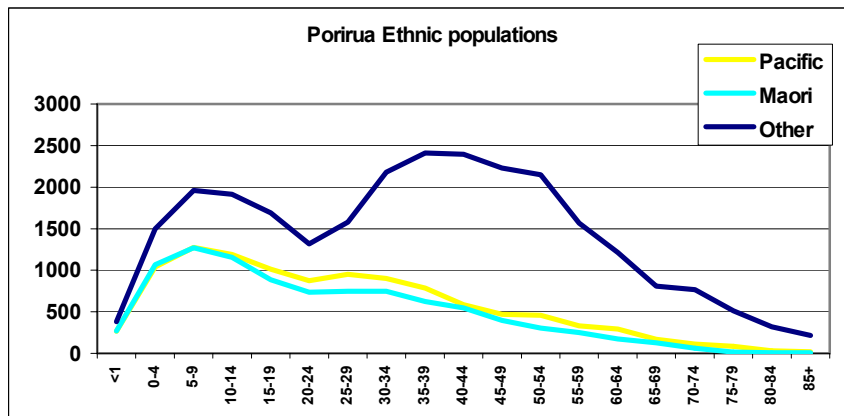
Kapiti ethnic/age distribution



Data source: Statistics New Zealand

The Kapiti population is dominated by the Other ethnic group, who make up 90% of the population. 8.7% of the Kapiti population is Maori, but they are a young population, with very few over 60 years of age. There are few Pacific peoples in Kapiti, and they are predominantly children and younger adults. In the 65 plus age group, 98% of the population is in the Other ethnic group, while Maori and Pacific people combined make up only 1.6%.

Porirua ethnic/age distribution

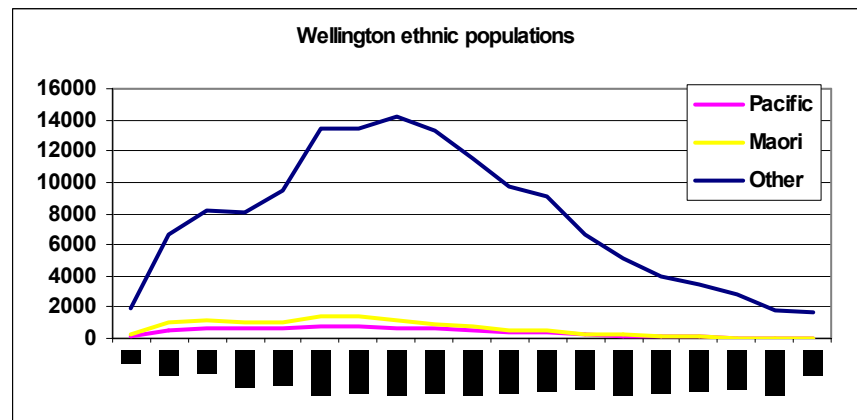


Data source: Statistics New Zealand

57% of the Porirua population is in the Other ethnic group, 23% is Pacific and 20% is Maori. The Pacific and Maori populations are young in comparison to other ethnicities. Maori and Pacific children comprise 57% of the total number of children aged under 15.

Wellington ethnic/age distribution

The Other ethnic group makes up almost 90% of the Wellington population. The Maori and Pacific populations are relatively small in comparison. In the over 60 age group only 5% of the population are Maori or Pacific people.



Data source: Statistics New Zealand

3.6 Iwi demographics

The following analysis of different iwi is based on figures from the 2001 census. It should be noted that if a person identified with more than one iwi, then they are counted in both groups. This is why the recorded iwi population of 31,770 is more than the actual C&C DHB Maori population of 24,222. Iwi have been grouped by Mana Whenua status⁶ and in larger regions, which includes iwi from within that region.⁷

⁶ Te Atiawa includes Ngati Tama (Taranaki, Te Whanganui a Tara/Wellington, Te Waipounamu/South Island and region unspecified) Ngati Toa Rangatira includes Te Waipounamu/South Island and Te Whanganui a Tara/Wellington.

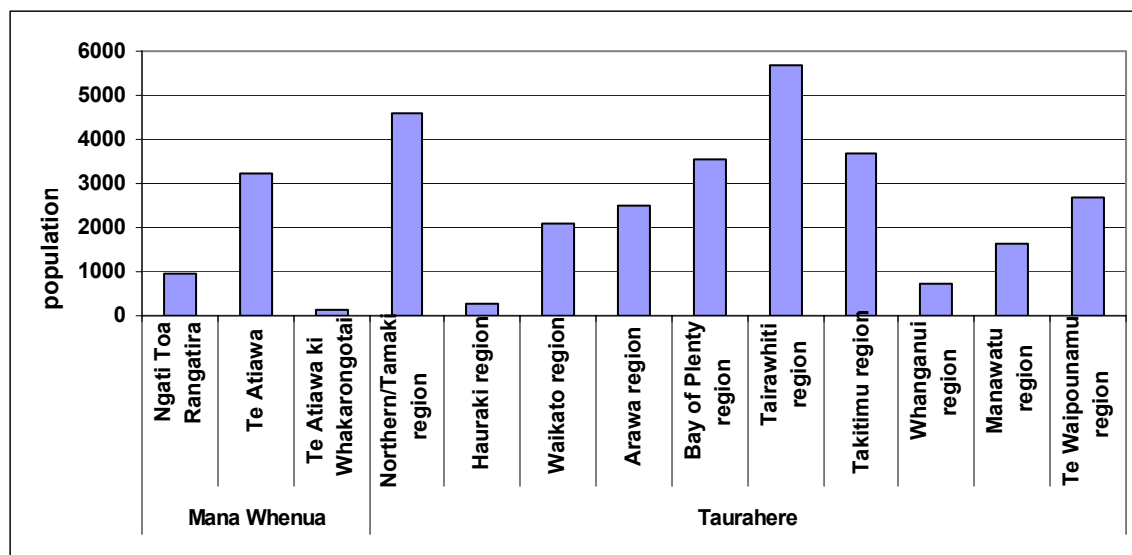
⁷ These regions have been identified using the following source http://www.takoa.co.nz/media/rohe_iwi.pdf

C&C DHB population of different iwi

Iwi	C&C DHB		Kapiti	Porirua	Wellington
Ngati Toa Rangatira	933	2.9%	15%	68%	17%
Te Atiawa	3240	10.2%	14%	38%	48%
Te Atiawa ki Whakarongotai	141	0.4%	57%	28%	15%
Northern/Tamaki region	4602	14.5%	10%	36%	53%
Hauraki region	294	0.9%	8%	37%	55%
Waikato region	2106	6.6%	13%	37%	51%
Arawa region	2511	7.9%	12%	37%	51%
Bay of Plenty region	3534	11.1%	9%	41%	50%
Tairawhiti region	5667	17.8%	10%	43%	47%
Takitimu region	3702	11.7%	10%	37%	53%
Whanganui region	747	2.4%	12%	35%	53%
Manawatu region	1617	5.1%	20%	38%	42%
Te Waipounamu region	2676	8.4%	13%	29%	58%
TOTAL	31770	100%	12%	39%	50%

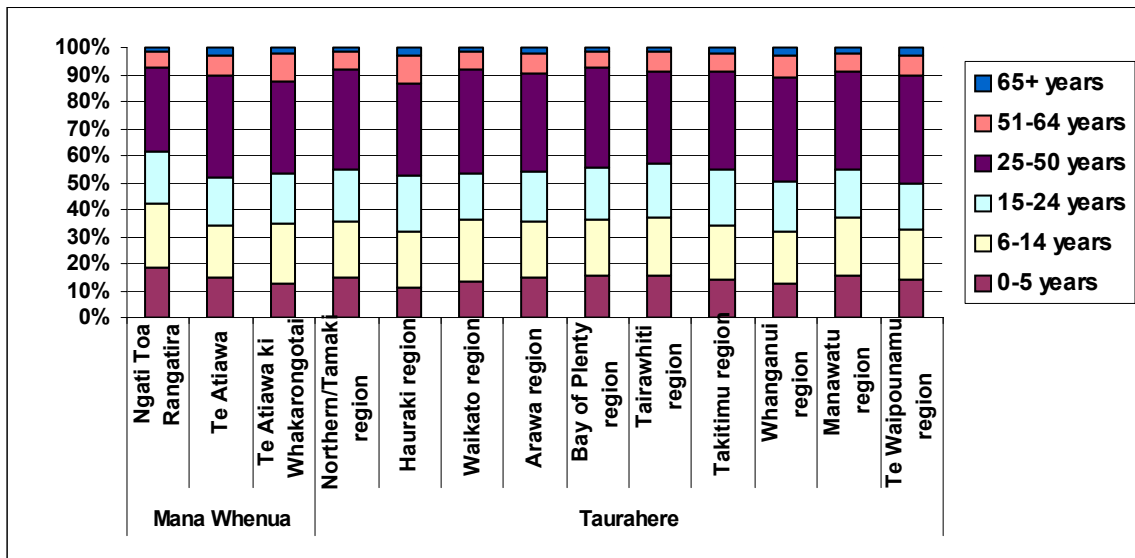
Data source: Statistics New Zealand

C&C DHB population of different iwi



Data source: Statistics New Zealand

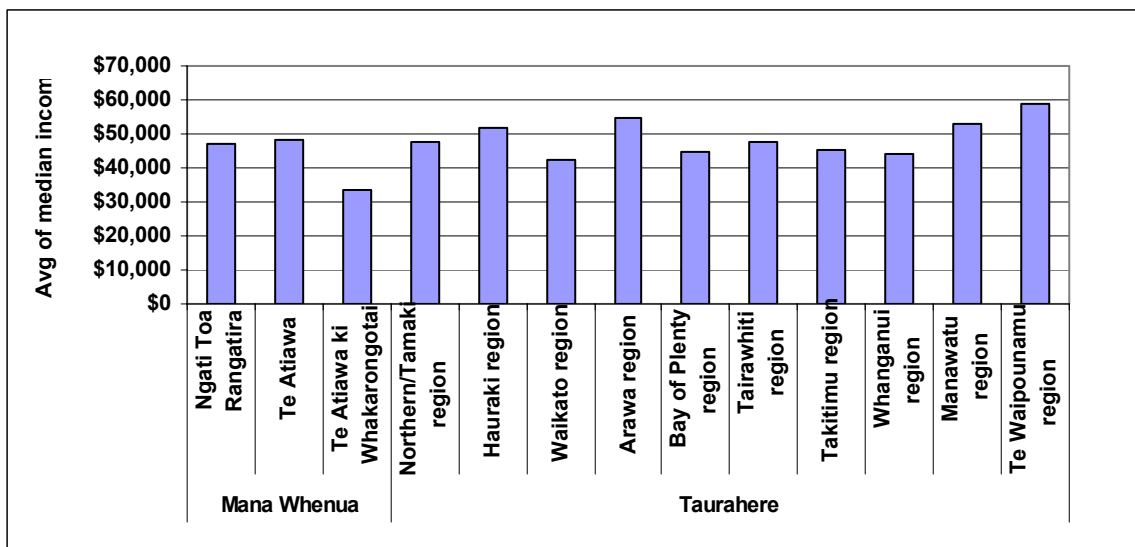
Age distribution by iwi



Data source: Statistics New Zealand

There is little variation in age structure between different iwi. Most have only around 10% of the population aged over 50. The Hauraki region has the oldest population, with approximately 14% of the population aged over 50.

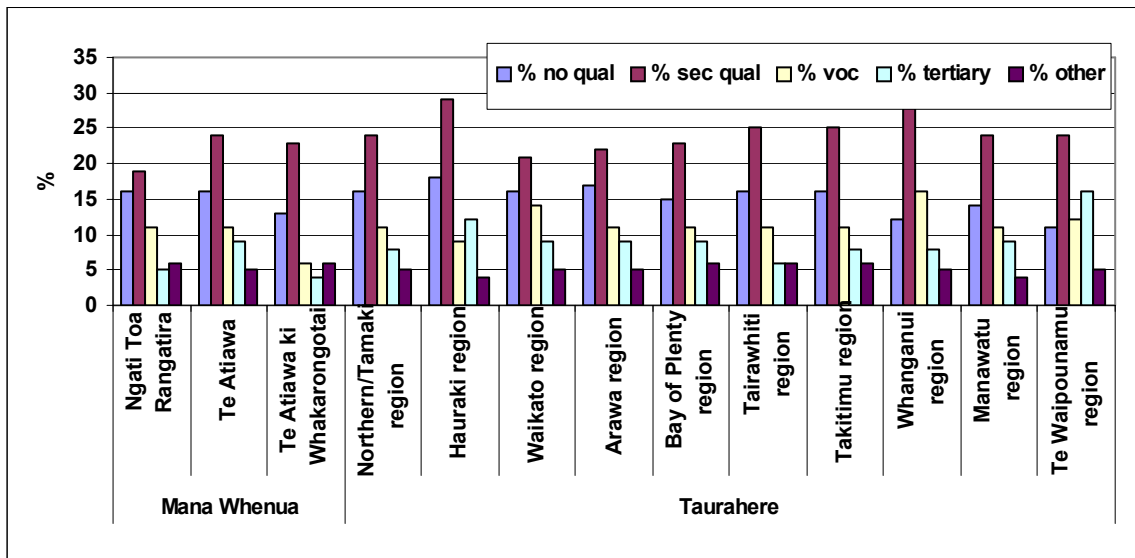
Average household income by iwi



Data source: Statistics New Zealand

There is significant variation in household incomes. Te Waipounamu region has the highest average income, and Te Atiawa ki Whakarongotai has the lowest average income.

Qualifications by iwi

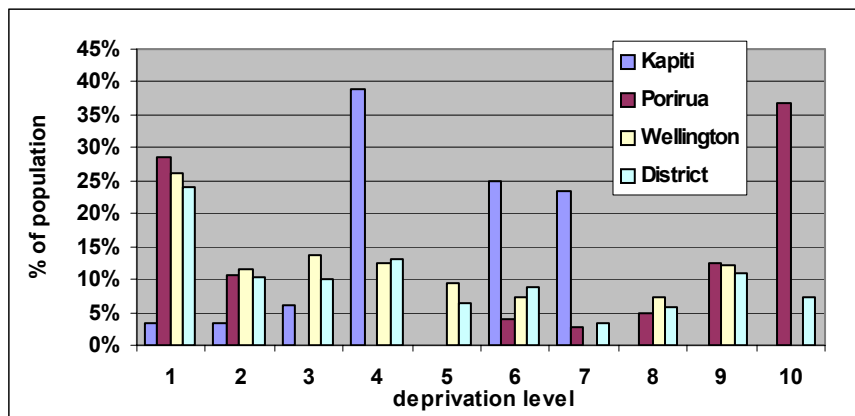


Data source: Statistics New Zealand

The highest qualification held by people in different iwi is shown in the graph above. 15% of the iwi population within C&C DHB have no qualifications, 23% have a secondary qualification as their highest qualification and 8% a tertiary qualification. Note that only 51-68% of people who identified with an iwi responded to this question.

3.6 New Zealand deprivation index

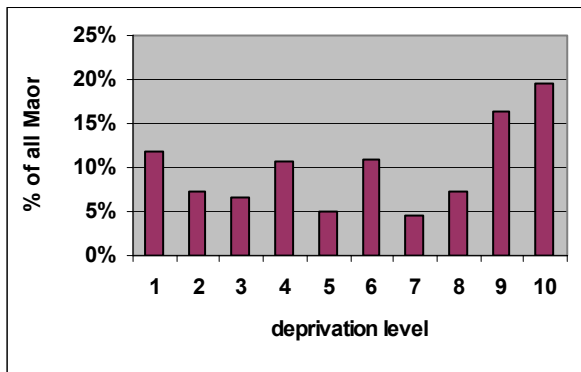
TLA populations and NZ Deprivation Index



Data source: Statistics New Zealand

Porirua is a community with significant contrasts and only small percentages in the middle deprivation groups. 37% of the Porirua population live in areas classified as NZDep 10 and 29% live in NZDep 1. The majority of the Kapiti population live in NZDep 4 to 7 areas. 26% of Wellington's population live in deprivation level 1 areas.

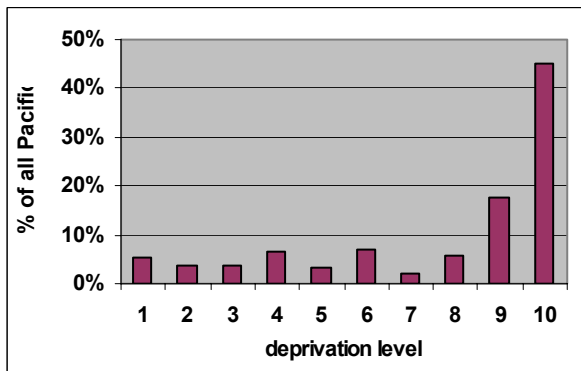
3.7.1 Ethnic groups and NZ Deprivation Index



Data source: Statistics New Zealand

Maori deprivation

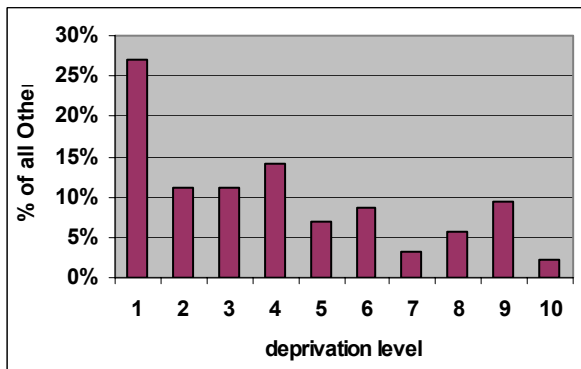
19% of the Maori population are living in the most deprived areas (NZDep 10) and a further 16% live in NZDep 9 areas. The rest of the population is spread across NZDep 1 to 8, with between 5 and 12% of people at each deprivation level.



Data source: Statistics New Zealand

Pacific deprivation

45% of all Pacific people in the district are living in the most deprived areas (NZDep 10), and a further 17% live in NZDep 9 areas. The rest of the population is quite evenly spread across NZDep 1-8, with between 2 and 7% of people at each deprivation level.

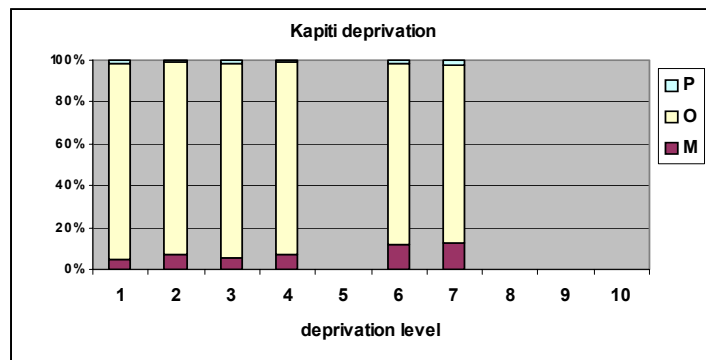


Data source: Statistics New Zealand

Other deprivation

27% of people in the Other ethnic group are living in the least deprived areas (NZDep 1). Only 2% of people live in the most deprived areas (NZDep 10).

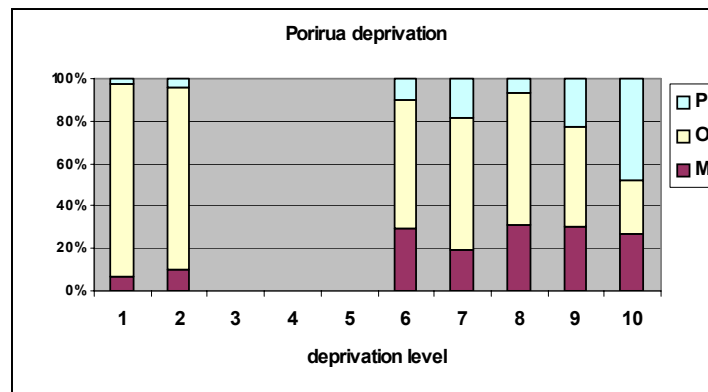
Ethnic composition of NZDep - Kapiti



Data source: Statistics New Zealand

There are no high deprivation areas in Kapiti (NZDep 8-10). Maori and Pacific only contribute a small percentage at each level of deprivation, but Maori make up slightly greater proportion of deprivation levels 6 and 7 (12 and 13% respectively).

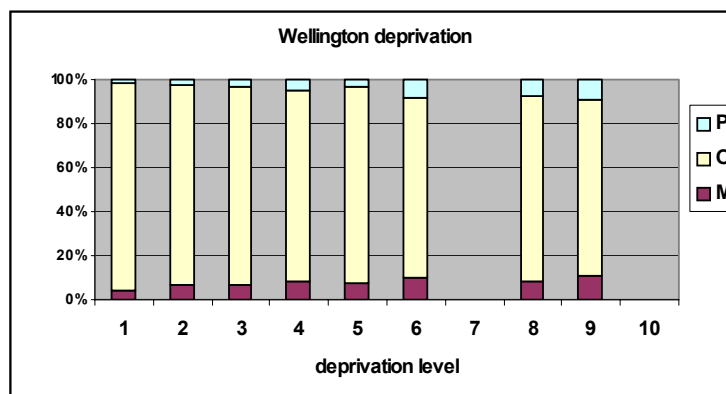
Ethnic composition of NZDep - Porirua



Data source: Statistics New Zealand

There are no areas classified as NZDep 3-5 in Porirua. Approximately 90% of people living in the least deprived area (NZDep 1 and 2) are from the Other ethnic group. Maori make up a fairly equal proportion for deprivation levels 6-10. Nearly half of all people living in the most deprived areas (NZDep 10) are Pacific.

Ethnic composition of NZDep - Wellington



Data source: Statistics New Zealand

94% of people living in the least deprived areas (NZDep1) in Wellington are from the Other ethnic group. The percentage of the population that is Maori or Pacific peoples increase with increasing deprivation.

3.7.2 Children and deprivation

Percentage of children living in deprived areas

	Children in NZDep 6-10	Children in NZDep 9 and 10
Kapiti	35%	0%
Porirua	64%	56%
Wellington	17%	7%
District	32%	19%

Data source: Statistics New Zealand

More children live in the more deprived areas compared to the population as a whole. This means that children are relatively more "deprived" than the whole population is. In Porirua, 64% of all children (aged under 15 years) live in areas that are designated NZDep 6-10, and 56% of all children live in areas that are the most deprived, ie NZDep 9 and 10.

Weighted average deprivation of children by TLA

	Weighted average NZDep score	
	Children	Whole Population
Kapiti	4.7	4.8
Porirua	6.6	6.1
Wellington	3.4	3.7
District	4.4	4.3

Data source: Statistics New Zealand

The weighted average NZDep score for the population of under 15's varies by TLA. In more affluent Wellington there are fewer children living in the most deprived areas compared to adults, therefore their weighted average NZDep is lower than that of the population as a whole. In Porirua the reverse is true.

Deprivation levels of children by ethnic group

	Avg. deprivation score	% in NZDep 6-10	% in NZDep 9 and 10
Maori	6.1	55	36
Other	3.5	19	8
Pacific	7.8	74	64
District	4.4	32	19

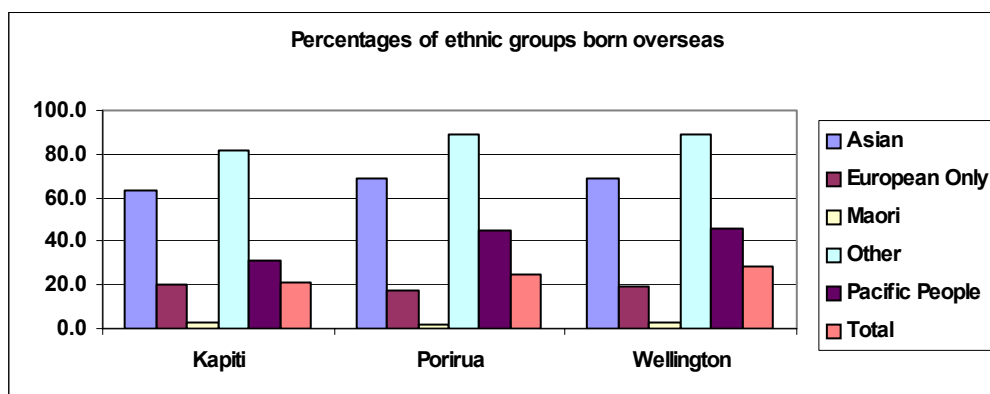
Data source: Statistics New Zealand

By definition 50% of the New Zealand population should be in deprivation levels 6-10 and 20% in deprivation levels 9-10. In general children in the district are slightly better off than children nationally. However young people in the Pacific ethnic group have a very high level of deprivation compared to all other groups including Maori.

3.8 Immigration

Note that the ethnicity groupings used in this section differ from those used in most of the document. In the majority of the report there are three groupings, Maori, Pacific, and Other (ie non Maori and non Pacific). For this section the Other group has been broken down into three groups, Asian, European only, and Other. Hence the "Other" group in this section is not comparable to the "Other" group in the majority of the report.

Percentage of ethnic groups born overseas



Data source: Statistics New Zealand

Overall 26.6% of C&C DHB residents were not born in New Zealand. The percentages of immigrants by ethnic group are remarkably similar throughout the district. 89% of the Other ethnic group and 69% of the Asian ethnic group were born overseas, while 45% of all Pacific people were born overseas. Only 2% of Maori and 18% of Europeans were born overseas.

Some census area units (CAUs) have a high percentage of immigrants. Those with more than 30% immigrants are listed below. Most CAU's have a lower percentage of immigrants in census 2001 than in census 96.

Areas with more than 30% immigrants

Cannons Creek East	37
Kilbirnie East	34
Lambton	34
Waitangirua	34
Maupuia	34
Karori Park	33
Newtown East	33
Cannons Creek North	32
Berhampore	32
Cannons Creek South	32
Kingston	30
Adelaide	30
Newlands East	30

Data source: Statistics New Zealand

3.9 Household size and crowding

The number of people per household and the number of people per bedroom give an approximate measure of overcrowding. Overcrowding is considered to be a risk factor for some health problems⁸, but does not appear to be a significant problem in the district. Health conditions that have been associated with overcrowding such as childhood infectious diseases, respiratory infections, asthma and bronchitis. Household overcrowding may also contribute to cellulitis.

The mean number of people per household in the C&C DHB district is only 2.6⁹, and the mean number of persons per bedroom is only 0.9. The figures by ethnic group however, show some variation, with Pacific households have higher average numbers of people per household and people per bedroom.

⁸ "Definitions of Crowding and the Effects of Crowding on Health: a Literature Review." MOSP

⁹ Mean = total number of people in district divided by total number of bedrooms in households.

Mean persons per household and persons per bedroom

Ethnicity	Mean persons per Bedroom	Mean persons per household
Maori	1.1	3.0
Pacific	1.3	4.0
Other	0.9	2.5

Data source: Statistics New Zealand

The data in the table above is based on mean figures per census area unit, which obscure individual household data. To determine whether there are individual households that are "overcrowded", we looked at the number of households where the ratio of people to bedrooms is greater than 2¹⁰.

Only 1.2% of all households in the district have more than 2 people per bedroom. However this figure is far higher for Pacific people at 9.5% overall, or 10.7% for Pacific people in Porirua. Some areas with particularly high rates for Pacific people are Cannon's creek (12.2%), Maupuia (15.4%), and in Strathmore Park (18.2%).

3.10 Income and benefits

Mean household income has increased since census 1996. The Wellington population have seen the largest increase at 25% and the Porirua population the least increase at 9.8%.

Mean household income by TLA

	Mean Household income in 1996	Mean Household income in 2001	%increase
Kapiti	\$41,636	\$46,911	12.7
Porirua	\$51,359	\$56,386	9.8
Wellington	\$54,229	\$67,785	25.0
District		\$60,597	

Data source: Statistics New Zealand

Mean household income by ethnic group and TLA

Ethnicity	Kapiti	Porirua	Wellington
Asian	51,459	55,167	61,164
European Only	47,122	63,617	70,234
Maori	44,364	44,058	57,952
Other	28,858	22,682	47,173
Pacific People	46,940	42,798	50,833

Data source: Statistics New Zealand

All ethnic groups in Porirua, except Asians and Europeans, have lower household incomes than those living in Wellington or Kapiti. Europeans and Asians living in Kapiti have lower incomes than those in Wellington or Porirua. Maori and Pacific people have lower average incomes than the Asian and European ethnic groups.

¹⁰ Cultural perceptions of crowding may be different.

3.10.1 Households dependent on benefits

Just over 6.5% of households in the district have no income other than benefits. These benefits include superannuation, sickness benefit, community wage (unemployment) and domestic purposes benefit. Nearly three times as many households are dependent on superannuation as on the other benefits. Social isolation may be an issue for people on benefits as well as having low incomes.

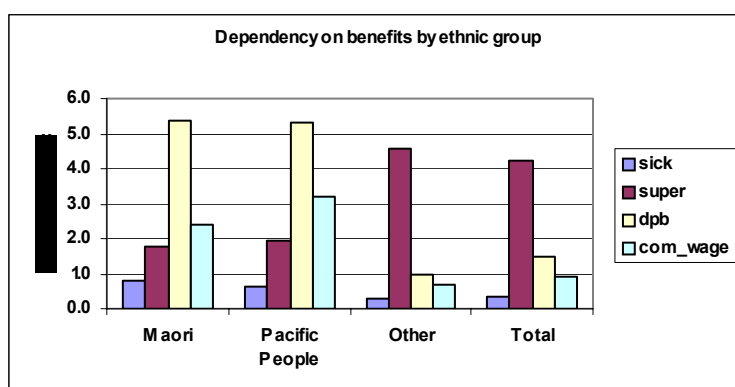
Dependency on benefits by TLA

TLA	% of households with no other income than benefits
Kapiti	11.9
Porirua	8.9
Wellington	5.0

Data source: Statistics New Zealand

The percentage of households dependent on superannuation is greatest in Kapiti, as it has the greatest percentage of eligible people. The percentage of people in Porirua eligible for superannuation is less than that of Wellington, but in more affluent Wellington, a larger percentage of older people will have other sources of income.

Dependency on benefits by ethnic group



Data source: Statistics New Zealand

Levels of dependency on Domestic Purposes Benefit are five times as high for Maori and Pacific households as for other ethnic groups. Since Maori and Pacific people have low survival rates into their 70s, it is not surprising that levels of dependency on superannuation are less than half that of the other ethnic groups.

3.11 Employment and education

Occupational classification and level of education are two other known determinants of health status. In C&C DHB, 73% of people 'in the workforce'¹¹ are employed for more than 30 hours per week, which is the New Zealand measure of full employment.

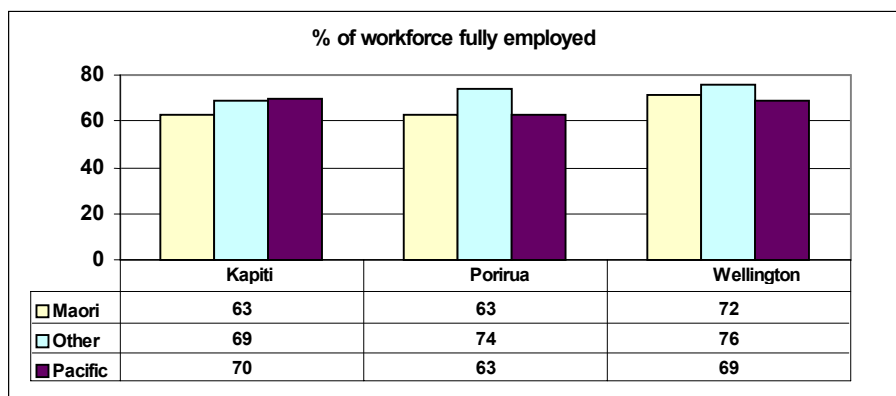
¹¹ Statistics New Zealand definition

% of workforce fully employed

	% of workforce employed
Kapiti	69
Porirua	70
Wellington	75

Data source: Statistics New Zealand

% of workforce fully employed by TLA and ethnic group



Data source: Statistics New Zealand

The percentage of the workforce that is fully employed varies very slightly across the district and across ethnic groups, although within TLAs there are some exceptions to this. The following areas have a low percentage of the workforce fully employed. These areas are all in Porirua.

Areas of low employment

Census Area	% of workforce fully employed
Porirua Central	48
Cannons Creek East	58
Cannons Creek North	59
Waitangirua	59
Elsdon-Takapuwahia	65
Cannons Creek South	65

Data source: Statistics New Zealand

3.11.1 People with no qualifications

The relationship between education and health status is difficult to define. There is an unavoidable relationship between educational level, employment and income, all of which are reflected in the deprivation level. It has been said that non-completion of secondary school is a greater risk factor than biological factors for development of many diseases.¹² It has also been said to be a more important factor than access to health care.

¹² Social Conditions and Self-Management Are More Powerful Determinants of Health Than Access to Care. [Miscellaneous Article] Annals of Internal Medicine.

We have no measure of non-completion of secondary schooling, so we have used as a proxy percentages of people who left school with no qualifications. In some instances higher percentages of people who left school with no qualifications are related to areas of high immigration.

% of people with no qualifications

	Kapiti	Porirua	Wellington
Other	33	30	15
Maori	44	51	30
Pacific	40	46	32

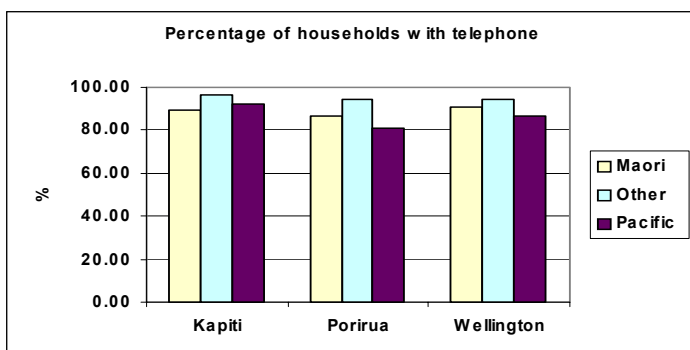
Data source: Statistics New Zealand

The percentage of adults with no qualifications in the district varies from 58.3% in Porirua Central to 3.8% in Kelburn. These proportions appear high, and on investigation it was discovered that the definition of "adult" according to the Statistics department is 15, not 18. Since many 15 year olds have not yet sat formal examinations, these numbers are too high. They indicate however, that a higher percentage of Maori and Pacific adults have no qualification, and that this is particularly so for those living in Porirua.

3.12 Telephone access

Access to telephones is quite high across the district and across ethnic groups. The areas below have the lowest percentage of households with a phone. These areas are all in Porirua.

Percentage of households with telephones



Data source: Statistics New Zealand

Areas with low access to phones

Area	% households with phone
Porirua Central	63
Inlet-Porirua Harbour	67
Cannons Creek North	74
Cannons Creek East	78

3.13 Motor vehicles

% of households with access to a motor vehicle

Area	% households with access to a motor vehicle
Kapiti	90
Porirua	86
Wellington	85
New Zealand	90

Data source: Statistics New Zealand

Porirua and Wellington have a slightly lower percentage of households with access to a motor vehicle than the New Zealand average.

3.14 Environmental determinants of health

3.14.1 Drinking water

Safe drinking water is a fundamental requirement for good health. The drinking water supply in the Capital and Coast district is generally very good. Drinking water quality is measured against the Ministry of Health's Drinking Water Standards for New Zealand (2000), and all water supplies for 500 or more people should have a Public Health Grading. There are two parts to this grade:

1. The grade for the source and treatment plant relates to water as it is when leaving the treatment plant before it enters the reticulation system. It is concerned with the barriers guarding against contaminated water at that point.¹³

Water source and treatment plant public health grading

Source and plant unsatisfactory		
Zone	Grade ¹⁴	Population
Otaki	D	4,700
Waitohu	D	1,000
Hautere	C	700

Data source: Greater Wellington Regional Council

The table above shows water supplies serving 500 or more people with an unsatisfactory source and plant grading. These areas are all in the northern Kapiti Coast district.

2. The grade for the distribution system is based on the risk of water becoming contaminated within the local supply pipes, and the procedures in place to minimise the risk of unsafe water to the consumer.¹⁵

Water distribution system public health grading

Distribution system unsatisfactory		
Zone	Grade ¹⁶	Population
Eastern Wellington	d	16,815

Data source: Greater Wellington Regional Council

The table above shows water supplies serving 500 or more people with an unsatisfactory distribution system.

There are other water sources with unsatisfactory gradings, but they supply only very small communities. In many cases these are not the only water supply to the area.

¹³ Greater Wellington Regional Council

¹⁴ **Source/plant grades: C=marginal, moderate level of risk, may be acceptable in some small communities, D=unsatisfactory, high level of risk**

¹⁵ Greater Wellington Regional Council

¹⁶ **Distribution system grade: d=unsatisfactory, high level of risk**

3.14.2 Air quality

The Greater Wellington Regional Council monitors fine dust, carbon monoxide and nitrogen dioxide at sites in the Hutt Valley and Masterton. These pollutants are discharged from sources like motor vehicles, domestic fires and industry and can all harm people's health and well-being.¹⁷

Regional monitoring has shown that the quality of our air is generally acceptable, however, roadside air quality monitoring in Wellington City to date has shown that Vivian Street, Willis Street and the Mt Victoria Tunnel all experience degraded air quality.¹⁸ A permanent monitoring station has recently been commissioned in central Wellington City. Results from this site are yet to be reported on, but, as a general comment at this stage, the site has yet to record an exceedence of the National Environmental Standards for the pollutants being monitored.¹⁹ The Regional Council are presently scoping out a suitable site in the Porirua basin for air quality monitoring to start at the end of 2004.

3.14.3 Parks & recreation facilities

The district is well served with parks and recreation facilities. In Wellington TLA there are 109 parks and playgrounds and 44 sports grounds. Recreation centres are based in Karori, Kilbirnie, Nairnville, Newlands and Tawa. Wellington City has 425 hectares of town belt.²⁰

Porirua TLA has 42 sports grounds, 40 playgrounds and 1 recreation centre.²¹

Kapiti TLA has 32 parks and reserves, and a recreation centre is planned for the district.²²

¹⁷ Greater Wellington Regional Council

¹⁸ Greater Wellington Regional Council

¹⁹ Aotasi Iose, Greater Wellington Regional Council (email 18/8/04)

²⁰ Wellington City Council

²¹ Porirua City Council

²² Kapiti Coast District Council

Chapter 4: Current Services

This chapter provides a descriptive summary of the type of services currently contracted for by C&C DHB. In some cases it also provides information on the volumes and/or contract amount for contracted services. Where available, information is included on the current workforce by ethnicity.

The information in this chapter is intended to provide a background so that measures of health outcomes or proxies for health outcomes shown in subsequent chapters can be compared to the current services provided to specific populations.

4.1 Overview

The following is a summary of current services:

C&C DHB purchase a wide variety of services with different levels of investment. Currently approximately 61% of expenditure is on Hospital and health services (both secondary and tertiary). The remaining 39% is on a range of community services including primary, aged care and disability support services, mental health services, Maori specific services, Pacific specific services, and public health services.

The largest growth in expenditure on services over the last three years has been in Hospital and health services, PHOs, and community pharmacy.

4.2 Primary and Community Care

The Primary and Community Care portfolio contract for the following types of services:

General practice, practice nurse, and management services through Primary Health Organisations and Primary Care Organisations	Diabetes services
Immunisation services	Services to reduce health inequalities
Asthma services	Whanau ora maternity support services
Health promotion services	Rheumatic fever followup (youth)
Services to improve access	Pharmacy services
Primary mental health	Laboratory services
Refugee services	Adolescent and youth health services
	Adolescent oral health services

The primary care sector and services are broader than those listed above however, and include providers such as physiotherapists, cancer support workers, midwives, prison nurses and field workers funded through a variety of mechanisms and in the voluntary sector.

As well as general practice services, C&C DHB's direct contracts include services for asthma education and management; chronic obstructive pulmonary services, smoking cessation; diabetes management and education; youth health; community mental health; immunisation and immunisation coordination; sexual health; training and development; maternity; school based services.

The profile of providers is as varied as the services they deliver; providers range from large primary care organisations like The Greater Wellington Health Trust/WIPA, to Maori providers, Pacific providers, Well Child and tamariki ora providers, pharmacists, allied health professionals and NGOs like YMCA.

The most significant primary care development in C&C DHB over the past two years has been the clustering of services together into Primary Health Organisations (PHOs). PHOs provide a range of services including general practice services, health promotion, services to improve access and take a population health approach to improving health and reducing inequalities. PHOs include iwi and community as well as provider in governance. This development has created 'added value' both in terms of funding, reduced access barriers and in creating synergies and coordination across services.

Our focus in the medium term is on consolidation of existing services. This recognises the enormous amount of growth the primary care sector has experienced since the advent of PHOs, and the need to build up services and the workforce that delivers them. As well as supporting community participation in fine tuning service development, there is an ongoing challenge to improving the integration of primary care, community and hospital services.

Primary care includes inter-sectoral work to improve health and there is close linkage with public health service activity. The range of public health services is covered in section 4.8.

General practice, practice nurse and management services through PHOs and PCOs

From 1 October 2004 C&C DHB will have six PHOs covering over 95% of the population. These are: Kapiti PHO (Kapiti), Tumai mo te Iwi PHO (Porirua), Porirua Health Plus PHO (Porirua), Capital PHO (Wellington), South East and City PHO (Wellington), Karori PHO (Wellington).

There are over 60 general practices including student health services, five Maori providers in Kapiti (1), Porirua (2) and Wellington (1) and Pacific primary care providers in Wellington (1) and Porirua (1). A further Maori provider is establishing in Wellington in 2004. There are two youth health services (Kapiti and Wellington) and 4 school health clinics in Porirua.

4.2.1.1 PHO enrolment

This analysis is based on PHO information from July to December 2003. It is based on the 5 current PHOs and involves 58 general practices in this district. Note that in addition to all of the practices in PHOs, there are 9 practices operating outside of PHOs. They include the after-hours medical centres, student health services, youth health services²³ and two fee for service (FFS) practices. There are also two non-PHO GPs approaching retirement, 2 sports medicine practices, and one GP in the process of selling up.

²³ One of the youth services is affiliated to a PHO but the funding for GP/nurse services is still claimed under a fee for service arrangement.

PHO Population²⁴ coverage in C&C DHB District

Territorial Boundaries	Enrolled in PHO		Access PHO ²⁵		Interim	
	People	%	People	%	People	%
C&C District	219,535	89%	40,340	18%	179,195	82%
Porirua	47,576	101%	28,528	60%	19,048	40%
Wellington	139,093	85%	10,990	8%	128,103	92%
Kapiti	32,866	95%	822	3%	32,044	97%

Note that the percentages shown for Access and Interim PHOs are percentages of the total enrolled population, not percentages of the district population.

The table above shows that the current five PHOs have enrolled 89% of the total district population. This represents approximately 220,000 people out of the district population of 245,451. The highest coverage is for Porirua (101%), followed by Kapiti (at 95%) and Wellington (at 85%) respectively. From 1 October 2004, the PHO population coverage would increase to approximately 95% of the district population, with two more practices joining a PHO and a new PHO starting in Karori.

It should be noted that the base or denominator used for the population coverage calculation is the Census 2001 data and therefore has not accounted for subsequent population growth in the district. Hence, the percentage of coverage of Porirua's population (which is more than 100%) may be explained by the fact that this population has increased by about 1% since the last census count²⁶ and that population is fully enrolled with a PHO.

Just over 40,000 (18% of the total enrolled population) people are enrolled with Access PHOs and the majority (more than 28,000 people or 60% of Porirua enrolment) are from Porirua. People that are enrolled in the Wellington Access PHO are mostly from South Eastern suburbs and Inner City, while the Kapiti Access enrolment is mostly local Maori people.

PHO Coverage of High Needs Population in C&C DHB District

High Need Groups	Census Population 2001	Total PHO Enrolment		Access PHO	
		People	%	People	%
Maori	24,240	18,119	75%	9,503	52%
Pacific	18,681	18,541	99%	12,809	69%
High Deprivation/ Low Income Enrolment	40,488	30,867	76%	22,339	72%

24 Tables 1 and 2 only include the enrolled population with addresses in Wellington, Porirua and Kapiti in order to have valid comparison with the population from Census 2001 within the same territorial boundaries.

25 Access PHOs refer to PHOs that are funded at higher capitation rates to provide low-cost access to primary health care, with maximum patient charges not more than \$20.

26 According to Statistics NZ population estimates to 30 June 2002, based on Census 2001 data, the population growth for Porirua is 0.6%, Wellington at 2% and Kapiti at 1.8%.

Of all the high need groups, Pacific people have the highest level of enrolment (at 99%). This is followed by people in high deprivation areas and Maori at 76% and 75% respectively. Just over half of Maori people enrolled are in an Access PHO. In comparison, higher proportions of Pacific people (at 69%) and low income people (at 72%) are in an Access PHO. At least 15,000 people from the high needs groups are not yet enrolled with a PHO. However, this is decreasing as enrolment increases with more practices joining PHOs and "Services to Improve Access" (SIA) interventions reaching more high needs groups.

PHO coverage by age group and gender are summarised in table 3 below:

Age Groups and Gender Coverage for PHOs

Age Groups	Access PHO		Total PHO Enrolment		Census 2001 Population
	People	%	People	%	
Under 6	4,454	23%	19,598	95%	20,646
6 – 17	8,642	24%	35,476	90%	39,387
18 – 65	24,480	17%	141,919	88%	162,057
Over 65	2,764	12%	22,542	95%	23,790
Gender					
F	20,405	18%	116,176	91%	127,056
M	19,935	19%	103,359	87%	118,524

The table above shows that overall there are high percentages of coverage (from 87% to 95%) by age group and gender. Coverage by these two demographics largely reflects the relative utilisation levels of the population as a whole. That is, the very young, elderly people and females are more likely to access the primary care services compared with the rest of the population.

Youngsters below 17 years (about 13,000 people) are more likely to be enrolled with Access PHOs (23% compared with 18% of all people), while the elderly (at 12%) are less likely to be enrolled with an Access PHO. Since July 2004 Interim PHOs receive funding for people over 65 years according to the same formula as Access PHOs.

4.2.1.2 PHO GP Clinic-based Service Utilisation

The utilisation rates shown in the following table are interim crude rates and should be interpreted with caution as:

- They are not age standardised.

- TLA boundaries do not necessarily correlate with 'primary care' boundaries, for example Tawa practices belonging to the PHO in Porirua.

- The service utilisation information in this report is a measure of the actual use of clinic-based GP and nursing services only.

- They measure the performance **before** the start of the current primary health strategy and hence can be used as a benchmark for future trend analysis.

A significant funding commitment for community outreach nursing and community health worker services has not been included in these indicators.

At this stage of reporting, only GP clinic data for Porirua is available for analysis²⁷.

The data in the table is based on denominators determined by the July 2003 PHO registers with valid NHI²⁸ (labelled as Demographic Indicators), except for service utilisation where the April 2003 register was used to better match the time frame of available utilisation data from the Porirua Improving Access project.

The baseline results from Porirua suggest that Maori and Pacific people receive less primary care access than people of 'Other' ethnicity, as do people from most deprived areas, although at this stage the results have not been age standardised. Age standardisation will probably alter these results as the Other group has a much older population who have higher rates of primary care utilisation.

Primary Care Performance Indicators Capital & Coast DHB

PHO Base Year: 2003

Indicators	Ethnicity			Age Groups				Gender		Deprivation Index		Territorial Local Authority			Total	
	Maori	Other	Pacific	00-05	06-17	18-64	65+	F	M	5	Under 5	Kapiti	Porirua	Wellington		
I Demographic Indicators (July 2003 Registers) Number of valid enrolled patients																
1 PHO Enrolled 'Population	16537	172215	16398	14559	34417	132412	23762	109043	96107	27785	177365	27083	41818	106317	205150	
II Service Utilisation (Porirua only) Average number of visits per year	3.45	3.77	3.13	5.86	1.72	3.22	8.06	4.01	3.03	3.45	3.60		3.53			
III Emergency Department Presentations Measured by Number of attendances per year per 1000 PHO enrolled population	188	119	162	174	122	108	220	118	139	192	118	101	142	165	128	
IV Avoidable Admissions Measured by Hospitalisation rate per 10000 PHO enrolled population	131	80	126	197	46	44	319	80	96	147	78	131	108	90	87	
1 Ambulatory Sensitive Hospitalisations (ASH)	96	40	96	190	43	25	109	47	52	98	42	51	69	54	49	
2 Primary preventable (PH)	30	38	27	1	0	19	207	31	42	45	35	77	37	34	36	
3 Injury preventable (IP)	42	15	30	69	26	8	34	19	17	32	16	30	19	20	18	
V Childhood (2-3 years) Immunisation Measured by Percentage Immunised based on PHO enrolled population																
1 % Immunised across all PHOs Year 2002												82	82	92	85	
2 % Immunised across all PHOs Year 2003												81	88	86	86	
3 % Immunised by Access PHO Year 2002													80	84	81	
4 % Immunised by Access PHO Year 2003													86	89	87	
5 % Immunised by Interim PHO Year 2002												82	84	89	88	
6 % Immunised by Interim PHO Year 2003												81	92	86	86	

²⁷ The first dateline set by MoH for PHO service utilisation is 20 August 2004 for GP and Practice nursing services. The data used in this report is from a pilot project in Porirua.

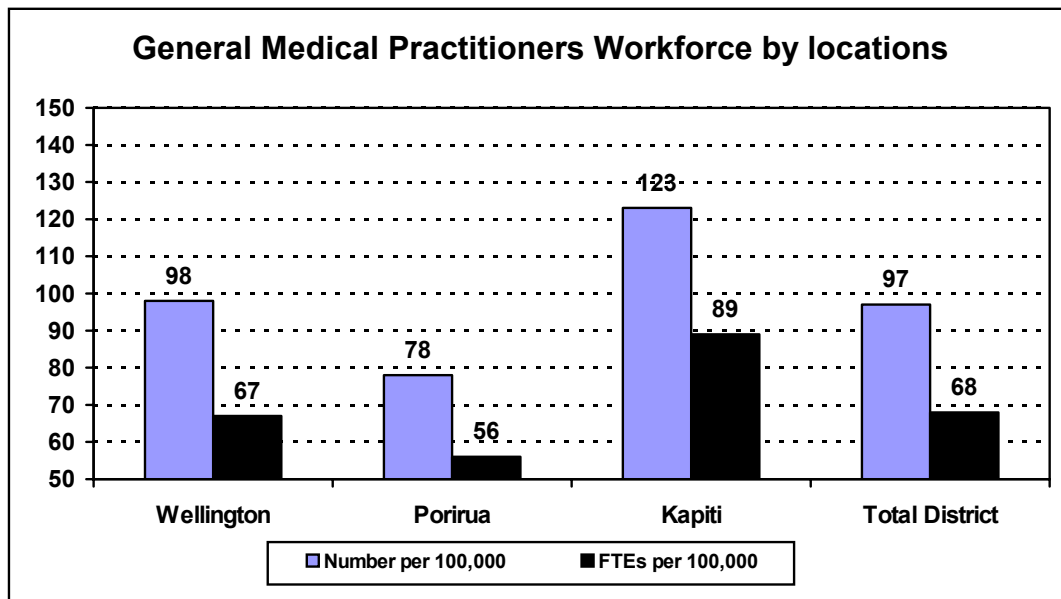
²⁸ Only population with valid NHI can be matched with other sources of data for further analysis.

4.2.2 General Medical Practitioners²⁹

Overall, C&C DHB has 97 general medical practitioners per 100,000 of population. However, a number of GPs work part-time and when this is taken into consideration 68 full-time equivalent (FTE) medical practitioners work in the district per 100,000 population³⁰. The hours of 20 GPs were unknown, therefore this ratio underestimates the actual FTEs.

There is significant variation in the service levels across the three TLAs within the Capital & Coast district. Porirua has the lowest service level both in terms of GP numbers and FTEs, while the smaller population on the Kapiti Coast is served by a larger number of GPs who also work longer hours.

General medical practitioners in C&C DHB by location per 100,000 population, December 2003

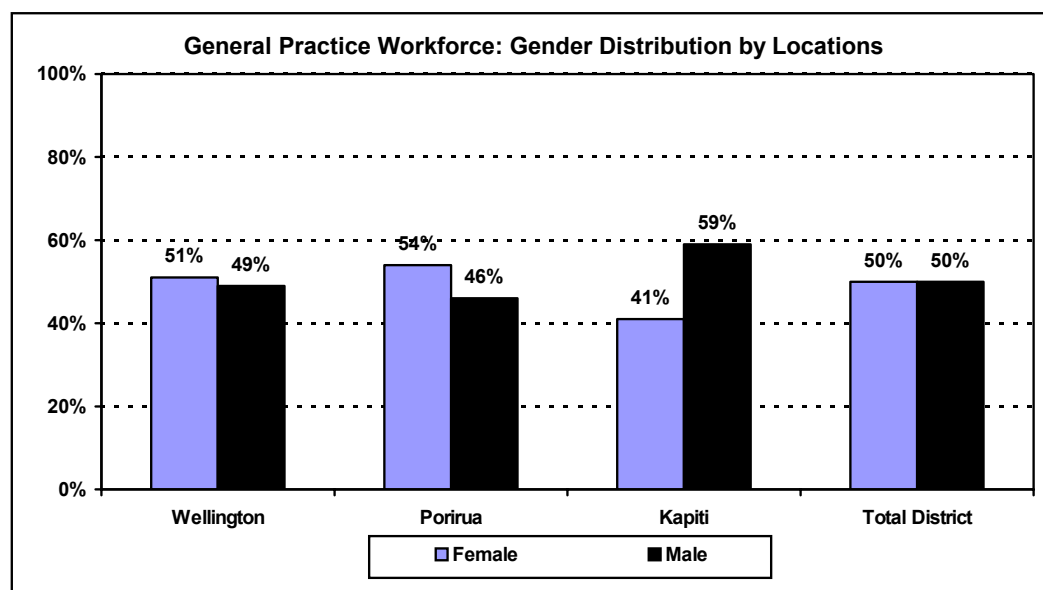


There is little difference in the gender distribution of GP workforce for the district as a whole. However, by location Kapiti has fewer female GPs while Porirua has a few more female GPs in the workforce.

²⁹ Source: Annual survey of general practices/ practitioners/ practice nurses conducted by C&C DHB. Last updated in December 2003.

³⁰ One Full-time equivalent calculation is based on 40 hours per week.

Gender of medical practitioners in general practice in C&C DHB by location, December 2003



4.2.2.1 Practice Nurses working in General Practice

Overall, C&C DHB has 89 practice nurses per 100,000 population. As a ratio of full-time equivalent (FTE) nurses 51 nurses work in the district per 100,000 population. The hours of 24 nurses were unknown, therefore this ratio underestimates actual FTEs.

There is significant variation in the service levels across the three territorial local authorities (TLAs) within the Capital & Coast district. Wellington has the lowest practice nursing service level both in terms of numbers of registered nurses and FTEs. In line with the GP service level, the smaller population in Kapiti Coast is well served by a larger number of nurses who also work longer hours compared with Wellington and Porirua. It should be noted that the practice nursing workforce in Porirua is higher than the district average but still lags behind that of Kapiti. However, this survey does not account for nurses working in the community in other than general practice services.

Data collection is currently underway to include primary care community nurses and community health workers.

4.2.3 Diabetes services

Funded diabetes services include annual checks, diabetes education, podiatry, retinal screening, and provision of voice glucose meters. Investment in these services has been gradually increasing over the past two years. It may be some time before the impact of recent investments is visible. See section 5.4 for information on the incidence and impact of diabetes in the district.

Retinal screening volumes C&C DHB

48% of the number of Maori and 55% of Pacific Island people predicted by the Ministry model to require screening have received it in the last two years (the screening cycle is biannual). For the Other ethnic group 85% of the predicted target have been screened.

Diabetes case detection rate, C&C DHB, 2002-2003

All Ethnicities	Target		Actual	
	%	People	%	People
Case detection 2002	57%	3,625	50.2%	3172
Case detection 2003	58%	3,610	60.6%	3792

In 2003 Capital and Coast reached their target for the diabetes case detection rate, but within this the case detection rate for Maori was only 37.6%. The case detection rate for Pacific was very good at 68.2%.

Diabetes case management, C&C DHB, 2002-2003

All Ethnicities	Target		Actual	
	%	People	%	People
Case management 2002	26%	-	26.3%	835
Case management 2003	23%	-	26.7%	1014

The measure used for diabetes case management is Hba1c, which is a measure of average blood sugar over the preceding week. The aim of treatment is to reduce the average Hba1c to less than 8.

4.2.4 Immunisation services

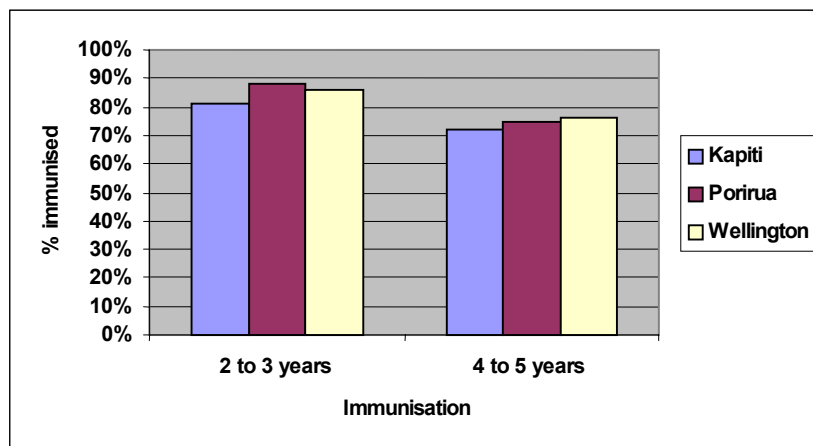
Immunisations available free of charge include: tetanus, hepatitis B, BCG for high risk individuals, childhood immunisations according to the Well Child schedule, and influenza for those aged 65 and over or meeting the chronic medical condition criteria.³¹

There is not accurate data for immunisation coverage in the District but the graph below provides an estimate from collated practice level audits.

Until the National Immunisation Register has been fully established and running for two years, we will be using this measure as a proxy indicator.

³¹ MoH 2002, Immunisation Handbook

Childhood immunisations - % fully immunised



4.2.5 Asthma services

Asthma services help clients formulate asthma management plans, provide asthma charts for children, hold clinics and education sessions, and network and coordinate with other services in the sector. See section 5. 7 on Respiratory conditions for further information on asthma rates.

4.2.6 Reducing inequalities

Reducing inequalities is a goal of all services that C&C DHB contracts for. There are also services and projects specifically aimed at reducing inequalities. Many of these involve partnerships with particular communities, incorporating a mix of primary care, whanau ora, Pacific models, public health and community development approaches.

4.2.7 Whanau ora maternity support

Whanau ora maternity support services attempt to maximise health outcomes for women who have additional needs. This is provided via community health workers, nurses, midwives providing access to information about LMC options, advocacy, tracing services, health promotion and coordination of services. Capital and Coast DHB do not currently have responsibility for funding all maternity services, however some information that is available on outcomes related to maternity services is shown below.

4.2.7.1 Lead Maternity Carer (LMC)

The latest figures available are from 2003; they show the number of mothers by the LMC category at the time of booking. More than 95% of all women are booked with a LMC. If they are not booked then they are identified at their first unbooked antenatal or delivery discharge and are categorised as being booked under the "Hospital Team".

86% of Maori mothers, and 91% of Pacific mothers are booked under primary caregivers (GP/Midwifery care) compared to 78% of all mothers. 2.2% of Maori women, and less than 2% of Pacific women are booked under private obstetric care compared to 14% of all mothers. Maori women are over-represented as bookings with the hospital team at 12% compared to 8% of all mothers and 7% of Pacific mothers. This could be because they were not booked and hence defaulted to the "hospital team" category. It could also be due to the fact that the hospital team only accepts high risk women and women from the Other ethnic

group who require specialist care may tend to seek this through the private sector making their percentage utilisation lower.

4.2.7.2 Breast feeding rates

In 2003 71% of Maori women, and 66% of Pacific women were fully breastfeeding on discharge from a C&C DHB maternity facility compared to 74% of all mothers and 77% of European/Other mothers.

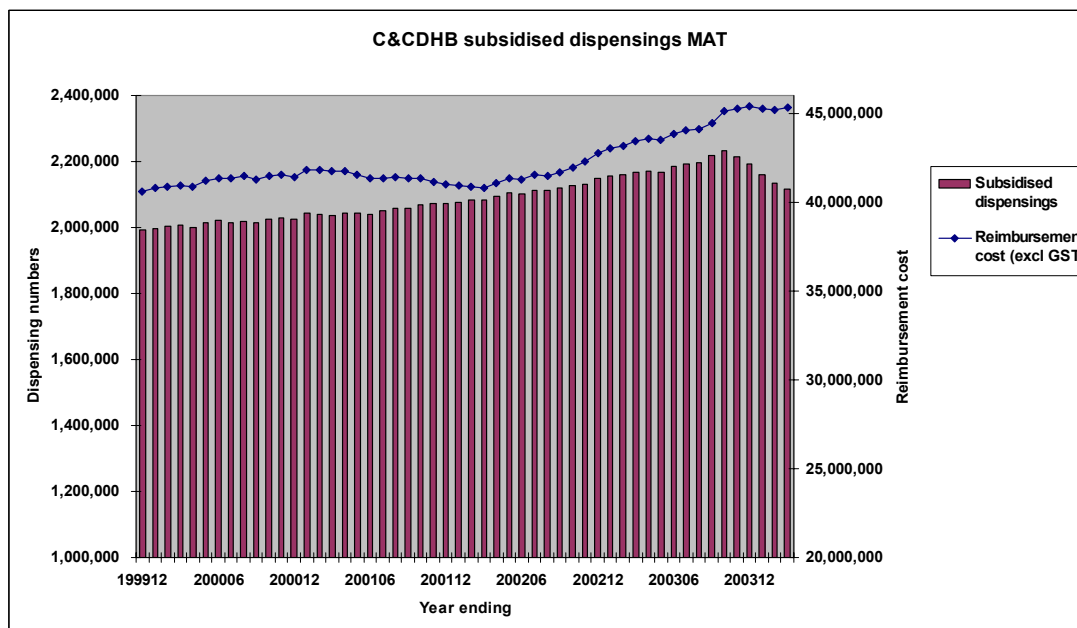
4.2.8 Rheumatic fever

Rheumatic fever services provide active follow-up for youth that have had rheumatic fever and require regular prophylaxis to prevent future rheumatic fever and cardiac complications. See section 5.2 Cardiovascular for information on rates of chronic rheumatic heart disease in the district. Chronic rheumatic heart disease tends to reflect living conditions and past access to primary care services. Active follow-up for people admitted with acute rheumatic fever should decrease rates of chronic rheumatic heart disease in the future.

4.2.9 Pharmacy services

As at May 2004 C&C DHB held contracts with 59 pharmacies. All of these provide base dispensing services, and most of these also dispense special foods. 38 provide methadone services, 8 provide clozapine services, 5 provide pharmaceutical review services, and 5 dispense complex medications. The graph below shows C&C DHB expenditure on subsidised pharmaceutical dispensings and dispensing volumes. Note that the decrease in volumes from late 2003 is as a result of Pharmac's stat dispensing change where certain pharmaceutical items are now dispensed in one lot rather than three monthly lots ie the same amount of pharmaceutical is now counted as one item rather than three. Pharmacy expenditure continues to be one of the high growth areas for C&C DHB.

C&C DHB pharmacy subsidies 1999-2003

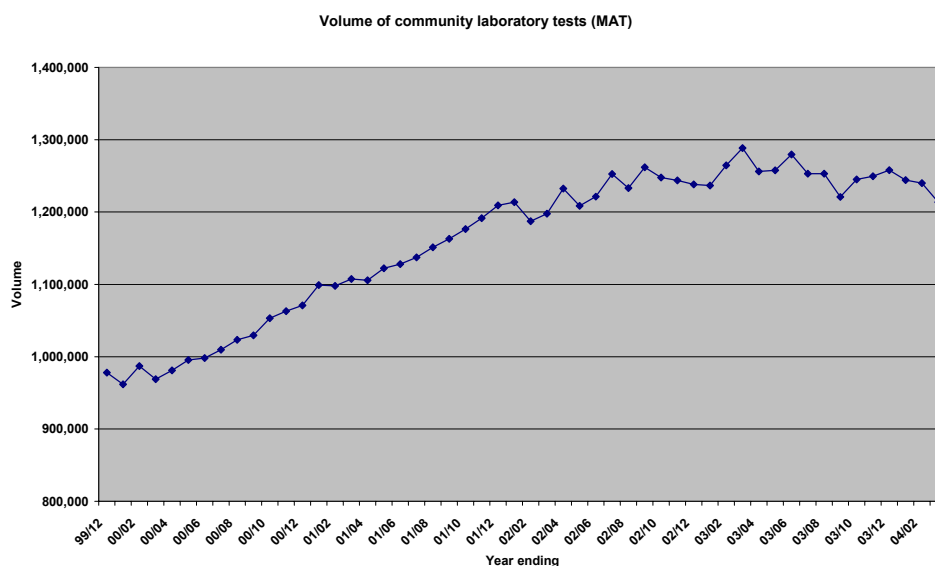


Data source: NZHIS Pharmhouse

4.2.10 Laboratory services

C&C DHB currently purchase both schedule and non-schedule laboratory tests both through community laboratories, the DHB provider arm, and non-schedule tests referred out of the district. The volume of community laboratory tests contracted for by C&C DHB over the last 4 years is shown in the graph below. Note that the change in the trend of volumes of community laboratory tests from 2001 is a result of both Independent Practitioner Association initiatives and a change in the method of purchasing community laboratory tests.

Community laboratory volumes



Data source: NZHIS laboratory data warehouse

4.2.11 Adolescent oral health

54 dentists provide adolescent oral health services. During the 2002 calendar year only 46% of adolescents in the C&C DHB district received an annual oral health consultation.

4.3 Aged Care and Disability

On 1 October 2003 Disability Support Services for people over 65 were devolved from the Ministry of Health to the District Health Boards. The Aged Care and Disability team purchase the following types of services for the C&C DHB district population:

- Aged care residential services
- Assessment, treatment and rehabilitation services
- Home based support and carer support services
- Needs Assessment Service Coordination (NASC)
- Pilot programs – Ageing in Place
- Palliative care

The following regional and/or national services are also managed by C&C DHB:

- Disability Information and Support (DIAS)

Some Disability Environment support and equipment services

Accredited Visitors Services

4.3.1 Aged care residential

The largest proportion of expenditure on Aged Care and Disability services is on aged care residential services. The number of subsidised beds per head of elderly population by TLA is³²:

No. of subsidised beds per head of elderly population

Beds per 1000	Resthome	Dementia	Continuing care	Psycho geriatric
WELLINGTON	42	4	32	2
PORIRUA	21	10	33	-
KAPITI	32	8	27	3

Average occupancy for the 2003/04 financial year to date has been:

Average occupancy for 2003/04 YTD

Average occupancy 2003/04 YTD (%)	Resthome	Dementia	Continuing care	Psycho geriatric
WELLINGTON	76	71	78	83
PORIRUA	95	75	77	-
KAPITI	101	73	84	98

The above table shows variation in occupancy rates across the district. C&C DHB has a policy and process in place to respond to changes in need, available on the DHBs website (<http://www.ccdhb.org.nz>). Where practicable, 90-95% occupancy is the aim for each service in each TLA.

Note that the removal of income and asset testing, which commences in July 2005, is likely to have an effect on the demand for services. At this stage it is difficult to assess to what extent and in what direction this effect will be.

It has not been possible to do trend analysis for people moving from their homes into residential care as this data is not available. Other types of available health data do not include information on whether the patient is a resident in a resthome or not, hence it is not possible to analyse service utilisation by place of residence.

4.3.2 Specialist Palliative care

4.3.2.1 Hospice services

The general trend shows an increasing number of clients are using the local hospice service. The table below shows that there are more female clients than males, with the exception of one reporting period. There are low numbers of Maori and Pacific clients using this service, but there are still issues with the ethnicity reporting as can be seen from the large proportion of patients whose ethnicity is recorded as unknown. Approximately 70-80% of clients are of Other ethnicities.

³² Note that the data is based on quarterly monitoring reports submitted by providers and is for 2 quarters only

Hospice services – clients by gender

Reporting period	Jul - Sep 01	Oct - Dec 01	Jan - Mar 02	Apr - Jun 02	Jul - Sep 02	Jan-Mar 03	Apr-Jun 03
Male	40%	-	55%	47%	47%	42%	43%
Female	60%	-	45%	53%	53%	58%	57%

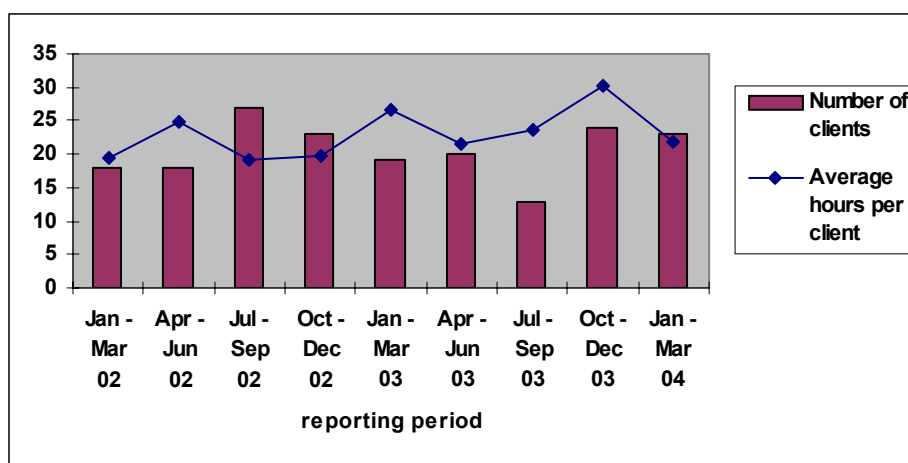
Note – where no percentage is shown, the data provided was incomplete

Hospice services – clients by ethnicity

Reporting period	Jul - Sep 01	Oct - Dec 01	Jan - Mar 02	Apr - Jun 02	Jul - Sep 02	Jan-Mar 03	Apr-Jun 03
Maori	3%	22%	3%	3%	3%	4%	4%
Pacific	4%	6%	3%	3%	2%	2%	3%
Other	83%	72%	79%	82%	81%	81%	78%
Unkown	11%	0%	14%	12%	14%	13%	16%

4.3.2.2 Cancer support services

No clients and average hours per client – Cancer support services



The number of clients receiving cancer support services fluctuates, but is not increasing or decreasing dramatically. The ethnicity and location of clients changes over time and no pattern is obvious.

Clients by ethnicity – cancer support services

Reporting period	Jul-Sep 02	Oct-Dec 02	Jan-Mar 03	Apr-Jun 03	Jul-Sep 03	Oct-Dec 03	Jan-Mar 04
Maori	4%	0%	5%	0%	0%	8%	0%
Pacific	0%	0%	0%	0%	0%	0%	13%
Other	96%	100%	95%	100%	100%	92%	87%

Clients by location – cancer support services

Reporting period	Jul-Sep 02	Oct-Dec 02	Jan-Mar 03	Apr-Jun 03	Jul-Sep 03	Oct-Dec 03	Jan-Mar 04
Kapiti	30%	22%	5%	35%	15%	21%	4%
Porirua	11%	4%	5%	5%	8%	25%	30%

Hutt	30%	43%	58%	50%	23%	21%	26%
Wellington	30%	30%	32%	10%	54%	33%	39%

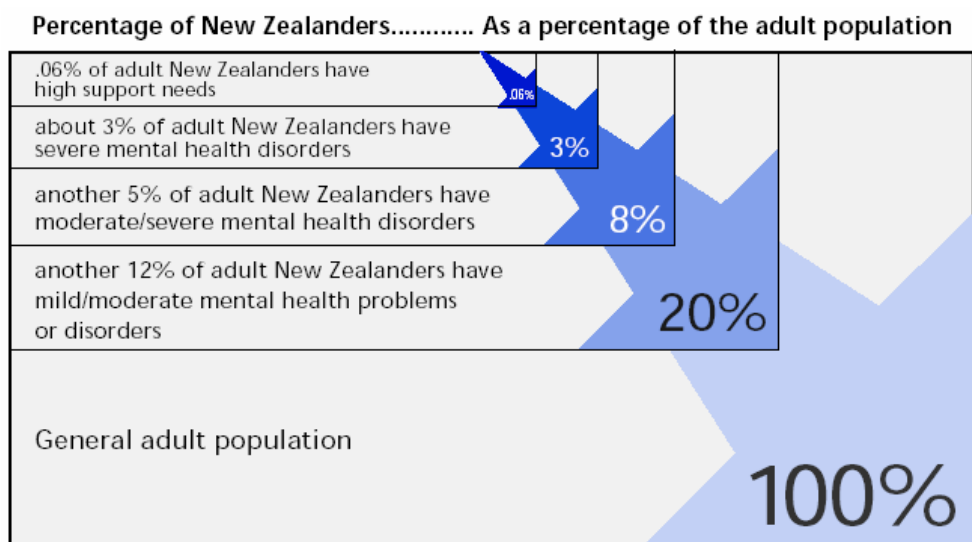
4.4 Mental Health and addiction services

4.4.1 Prevalence of mental illness

Statistics indicate that around 20% of the population have a diagnosable mental illness (including alcohol or drug addiction) at any one time. Around 3% of people (adults, young people and children) have serious, ongoing and disabling mental illness requiring treatment from specialist mental health and alcohol and drug services. The other 17% have less severe illnesses and problems, which most often can be managed by primary health services without requiring intervention by specialist mental health services. The diagram below illustrates the estimated prevalence of mental health problems amongst New Zealanders.

Services discussed in the remainder of this section are specialist mental health services providing treatment and support to the 3% of the population with the most severe mental illnesses. Note that C&C DHB is not yet fully funded to deliver to Blueprint service levels set by the Mental Health Commission.

Estimated prevalence of mental health problems amongst New Zealanders



Source: Ministry of Health 1997 Moving Forward – The National Mental Health Plan for More and Better Services

4.4.2 Funded Services

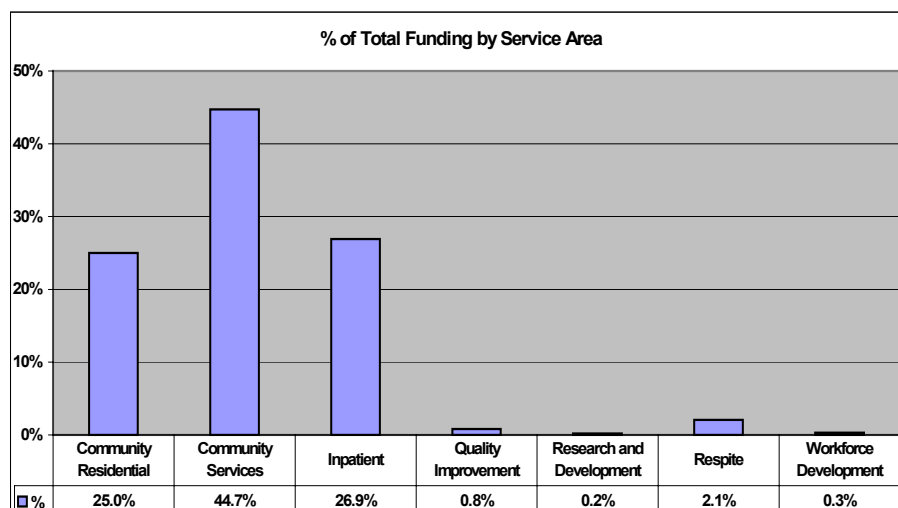
Capital and Coast DHB fund the following range of hospital and community based mental health and addiction services:

- Crisis Services
- Acute Inpatient and Day Programs
- Needs Assessment and Service Coordination
- Community Mental Health Teams
- Home Based Treatment

- Assertive Community Treatment
- Respite
- Residential Rehabilitation
- Day Activity Programs
- Work Rehabilitation / Education Support
- Community Support Work
- Advocacy / Peer Support
- Alcohol and Drug Services
- Child and Youth Community and Inpatient Services
- Forensic Mental Health
- Maori Mental Health
- Pacific Mental Health
- Quality Improvements and Information/Research
- A Range of Specialist Services Provided to the Central Region

Funding for C&C DHB population by service area for 02/03 is shown in the graph below. The majority of funding is spent in three areas; in-patient services, community residential, and community services. More information on the three main areas is provided below. Note that funding for these services is split between the DHB provider arm (83%) and NGO contracts (17%). Over 8% of the C&C DHB's Mental Health funding is dedicated to Kaupapa Maori services. Services targeted specifically at C&C DHB's Pacific Island population constitute 3% of C&C DHB's total Mental Health funding.

% total mental health funding by service area



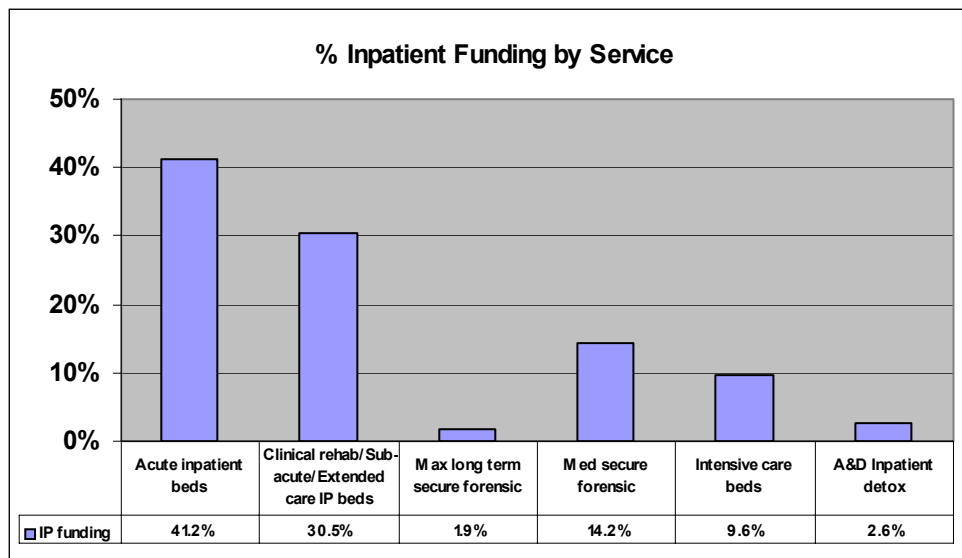
4.4.2.1 In-patient Services

Intensive Care, Acute, Rehabilitation, Forensic, and Child and Youth in-patient services are delivered from units at Porirua and Wellington. These services are utilised mainly by

consumers in C&C DHB but are also contracted to accept referrals from DHBs throughout the Central region.

Acute in-patient services are for people experiencing an episode of acute mental illness that requires assessment and treatment in a safe hospital setting. The intensive care service provides a place for people who require a period of more intensive care and are transferred back to the acute unit as soon as this is appropriate.

% inpatient mental health funding by service



The main types of in-patient mental health services are acute in-patient beds, clinical rehabilitation/sub-acute/extended care in-patient beds, forensic services, intensive care beds, and in-patient alcohol and other drug detox.

4.4.2.2 Community residential services

Community residential services provide a range of community based treatment, housing, and/or support services to people with experience of mental illness. Services include:

- Residential Rehabilitation
- Addiction Residential Treatment
- Community Support Work – including Home-based Support and Support for Independence
- Supported Landlord

4.4.2.3 Community services

Community mental health services include:

- Community Mental Health Teams
- Community Alcohol and Drug Services
- Maori Mental Health
- Pacific Mental Health
- Advocacy / Peer Support
- Forensic Community Liaison Services
- Refugee Mental Health Services
- Eating Disorder Services

Specialist Maternal Mental Health	Intellectual Disability Dual Diagnosis
Personality Psychotherapy Service	Child and Youth Community Services
Early Intervention Service	Psychiatric Consult Liaison
Consumer and Family/Carer	Activity Rehabilitation / Day Activity
Advocacy/ Peer Support Services	Work and Educational Support Services

4.4.3 Utilisation of mental health services by provider

4.4.3.1 DHB provider arm

The table below shows the breakdown of mental health services funded through the DHB provider arm and a comparison to other DHBs for the period 1 Jan 2003 to 31 Dec 2003. Note that trend data is not available at this stage. Some highlights from the table below are:

C&C DHB's per head of population expenditure is higher than the national median spend, but is not the highest.

The monthly median of the number of adult residents and acute adult in-patients seen per 100,000 population is slightly lower than the national median.

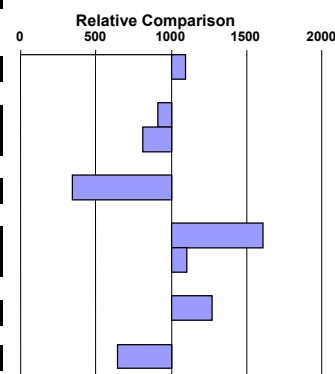
The monthly median number of Maori residents seen per 100,000 population is considerably higher than the national median.

The monthly median number of acute Maori in-patients seen per 100,000 population is slightly higher than the national median.

The monthly median number of child and youth residents (aged under 20) seen per 100,000 population is higher than the national median.

The monthly median number of older population residents (aged 65 years or over) seen per 100,000 population is lower than the national median.

Total Funded Services		C&CDHB	Minimum	Median	Maximum
Population (Under 65 years)		237,600			
Funded Services for 2002/03 (under 65 years)	\$/head	206	159	188	342
Total Adult Population (20-64)		165,900			
Adult residents seen (monthly median)	/ 100000	1,011	687	1,114	2,282
Acute Inpatients (monthly median)	/ 100000	42	9	52	126
All residents seen by MH services		2,271			
AOD Clients (monthly median)	percent	6	1	17	30
Total Maori population		27,620			
Maori residents seen (monthly median)	/ 100000	1,748	785	1,086	1,967
Acute Inpatients (monthly median)	/ 100000	54	27	49	75
Total Child and Youth population (<20 yrs)		71,700			
Child and Youth residents seen (monthly median)	/ 100000	745	204	585	1,284
Total Older population (65 yrs and older)		26,710			
Older residents seen (monthly median)	/ 100000	303	148	469	1,938



Data source: NZHIS MHINC

During the 2003 year in-patient services were provided to 0.72% of the C&C DHB population. The breakdown by ethnicity however, showed a different pattern. In-patient services were provided to 1.6% of the Maori population, 0.63% of the Other population, 0.43% of the Pacific population, and 1.1% of people whose ethnicity was not stated.

MENTAL HEALTH STATS FROM MHINC
 For DHB mental health services
 All C&CDHB residents use of any DHB mental health service
 Monthly median rates per 100,000

2002/03				2003		
	Maori	Pacific	C&CDHB	Maori	Pacific	C&CDHB
Committed under the MH Act*						
All adult residents seen	2334	988	1008	2480	1039	1011
All resident Child and Youth seen by any service	1265	508	706	1340	522	745
Adults seen by Regional Forensic Services	170	94	43	168	82	38
Acute In-patient**	61	34	42	54	39	42
People who used AOD services	83	19	64	72	19	54

* seems to be problem with these figures

**not exactly comparable as C&CDHB figure is for adults only (but child and youth numbers are small ~2)

The table above shows some mental health statistics from the national database (MHINC). In all categories the rates for Maori are higher than for Pacific or the district rate. Pacific rates for Adults seen by Regional Forensic Services are higher than the district rate, but similar or lower for all other categories.

4.4.3.2 *NGO services*

Approximately 17% of mental health funding for C&C DHB's population is dedicated to services provided by non-government organisations (NGOs). 70% of the NGO funding is for Community Residential Services, with a further 25% for Community Services. A recent analysis of Mental Health monitoring has shown that Maori and Pacific utilise approximately 40% of NGO Mental Health services. It is worth noting, however, that the NGO data supporting this analysis was based on utilisation as recorded in quarterly contract monitoring and the DHB is currently in the process of improving the accuracy of NGO monitoring data supplied. No further analysis will be provided based on NGO monitoring data until data quality improves.

4.5 Secondary and Tertiary Care

4.5.1 *A day in the life of Capital and Coast hospital and health services*

In a 24 hour period, 105 people are assessed at Wellington and Kenepuru Hospitals' Emergency Departments. During the same day, eight patients are admitted to the Intensive Care Unit (one of whom has been transferred by helicopter from the South Island), and 10 babies are born, with assistance from 10 of the 131 midwives.

Patients are moved from the emergency department to the ward on a trolley pushed by an orderly, who will walk 8km during their shift. In the ward the patient is greeted by one of the 1,345 nurses who work for C&C DHB, and is settled into a bed made with two of over 1,315 clean sheets issued daily from the laundry. 666 medical records are processed each day. Later, the patient visits the radiology department where 350 patients are examined daily. At lunchtime, they have one of the 1,156 meals prepared daily in the kitchens. One of 508 clinical support staff provides advice on the patient's medication, and \$30,000 of pharmaceutical products are dispensed each day. Throughout the day, 950 outpatients are also being seen, and 35 patients are admitted for day surgery.

Each day, 240 patients are seen by the mental health community teams, 54 patients are treated in the fracture clinic, 100 patients have their vision checked, and 30 infants are cared for in the neonatal unit.

104 patients are discharged each day (most having spent four days in hospital) and 131 therapists travelling in one of the 200 C&C DHB vehicles provide follow-up care in peoples' homes.

4.5.2 Funded services

Secondary and tertiary services contracted for include both in-patient and out-patient services for areas including:

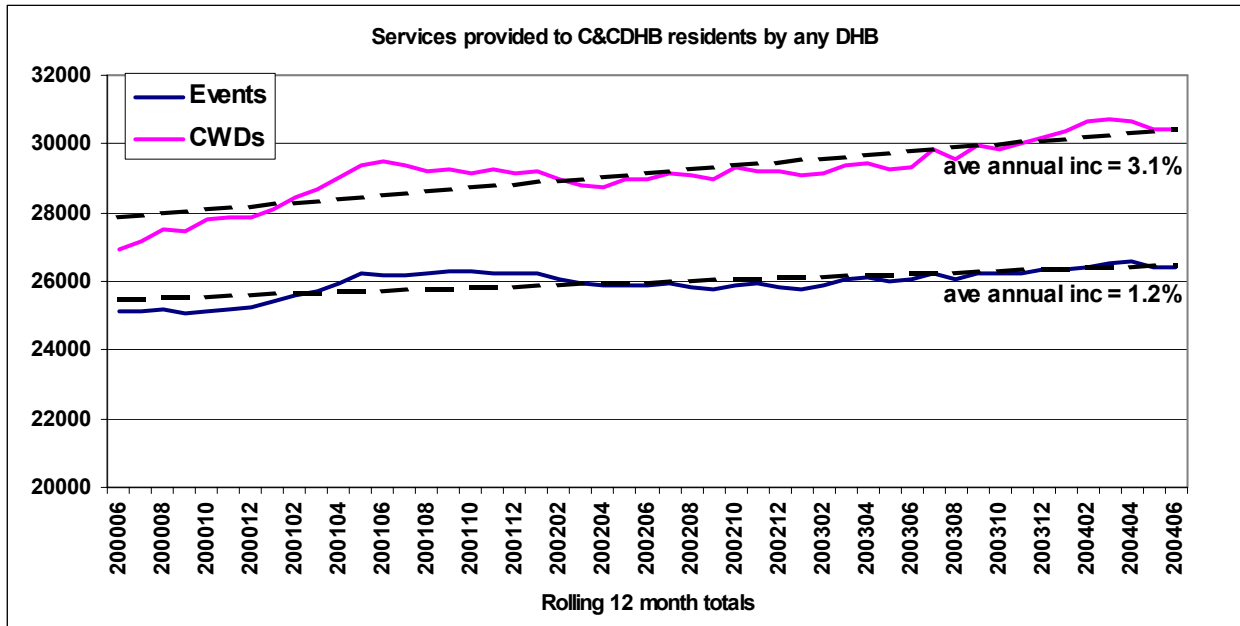
General medical	Haematology, oncology
Cardiology, cardiothoracic	Gynaecology
Ophthalmology, ENT	Neo-natal
Renal	Diabetes
Emergency services	Dermatology
Gastroenterology	Endocrine
Neurology, neurosurgery	Respiratory
Orthopaedic	Pain clinic
Oral health	Vascular
Paediatric medicine and surgery	Urology
General surgery	

C&C DHB is about to begin work on a study of hospital intervention rates. This analysis will compare intervention rates for different services, by age, ethnicity and deprivation, with national rates.

4.5.3 Volume and caseweight trends

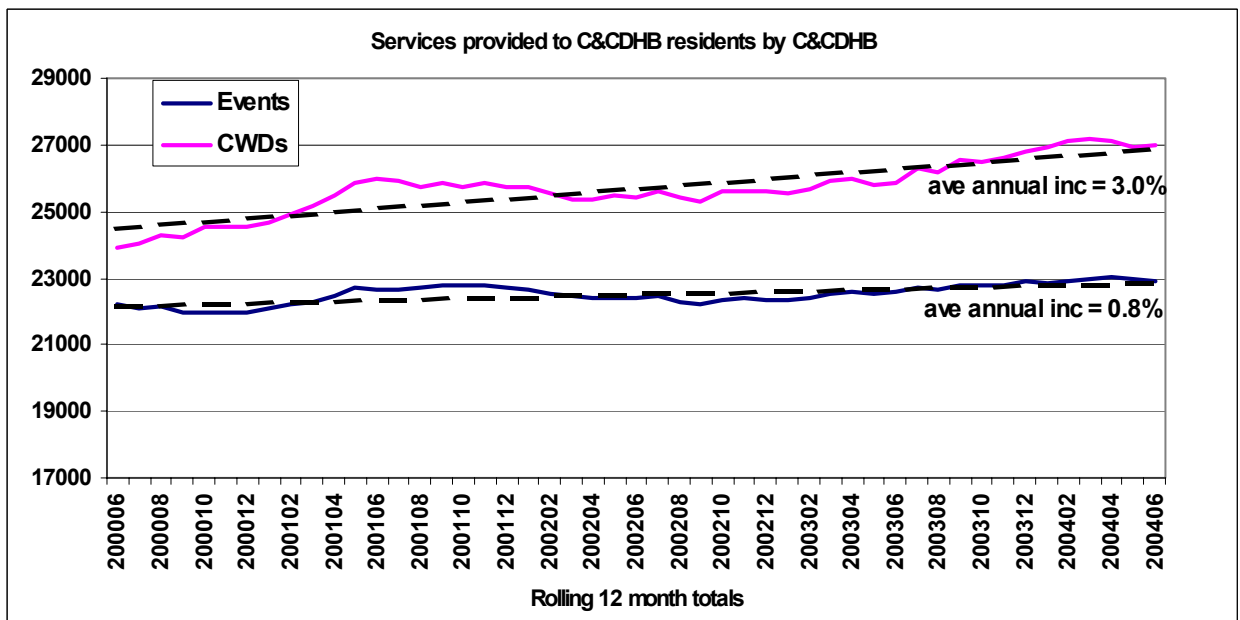
The following graphs are for in-patient events purchased through casemix. Under this method of purchasing, these events are assigned a caseweight reflecting relative resource consumption. Two measures of volume are shown; the first is simply the number of discharges, and the second is the number of caseweights.

Rolling 12-month totals - services provided to C&C DHB residents by any provider



The graph above is for Capital and Coast residents discharged from any hospital in the country, ie services C&C DHB is funding for its population. It shows that both the number of events and caseweights are increasing. Caseweights are increasing at a faster rate than events, indicating that the average resource requirement, and possibly patient complexity, of an event is increasing over time.

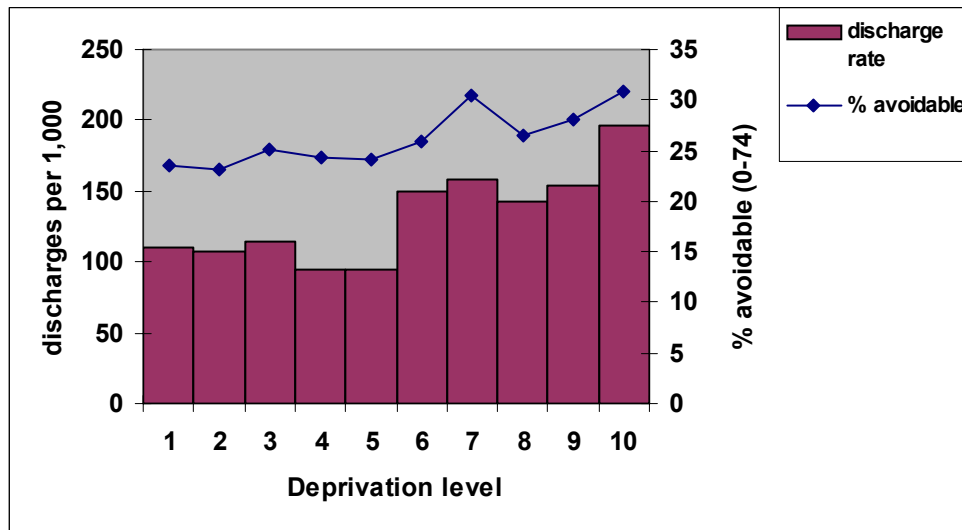
Rolling 12-month totals - services provided to C&C DHB residents by C&C DHB provider



The graph above is for Capital and Coast residents discharged from a C&C DHB hospital, ie services C&C DHB is providing for its population. For the previous four years, the proportion of C&C DHB residents treated locally has decreased from 88% to 86% and local caseweights have fluctuated within a 1.5% range. (Note – approximately 10% of C&C DHB’s total funding allocation is paid to other DHBs.)

4.5.4 Morbidity

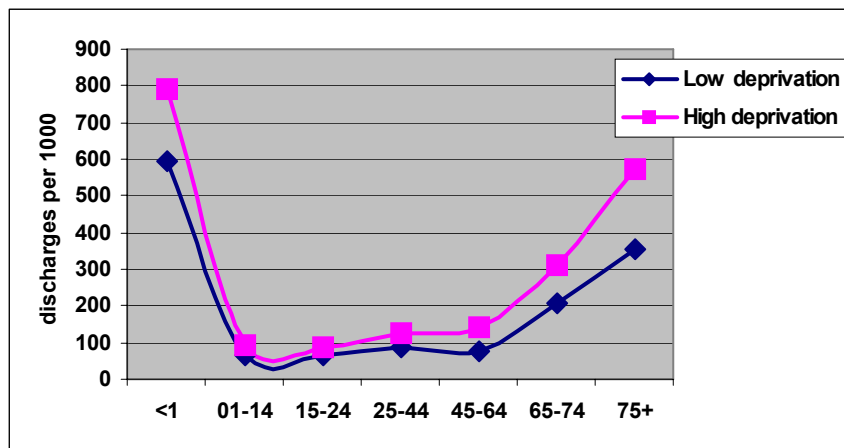
Hospital discharges by deprivation, C&C DHB, 2002/03



Data source: Ministry of Health

There is a trend for increasing hospital discharges with increasing deprivation. The proportion of discharges that are avoidable also increases with deprivation. The graph below shows hospital discharges for people living in 'low deprivation' (NZDep 1-5) areas versus people living in 'high deprivation' (NZDep 6-10) areas.

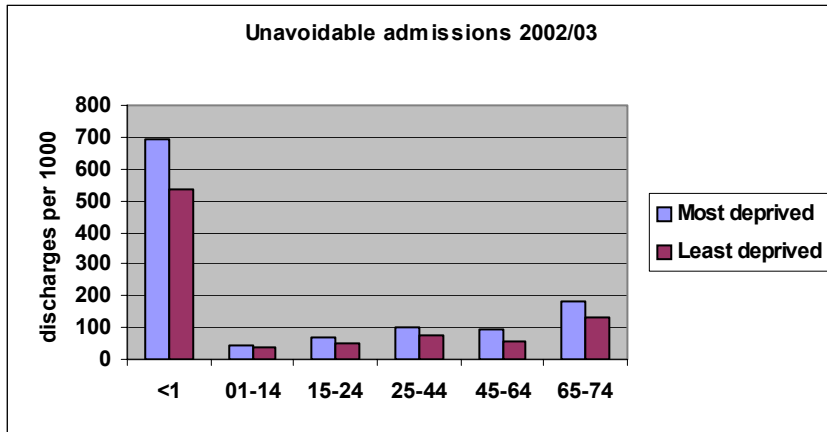
Hospital discharges by age and deprivation, C&C DHB, 2002/03



Source: Ministry of Health

People living in high deprivation areas have higher discharge rates at all ages. The gap is widest for infants under one and older people aged 65 and over.

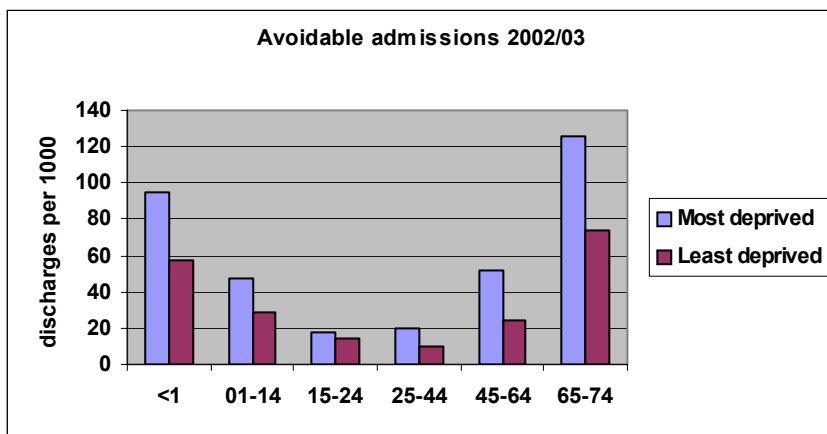
Unavoidable discharges by age and deprivation, C&C DHB, 2002/03



Data source: Ministry of Health

Unavoidable discharges are highest for infants under one. The majority of this group is made up of neonatal babies. The most deprived group have higher unavoidable morbidity rates at all age groups. However this pattern is more apparent for avoidable morbidity. Avoidable discharges are highest for young children and the elderly and lower for the age groups in between.

Avoidable discharges by age and deprivation, C&C DHB, 2002/03

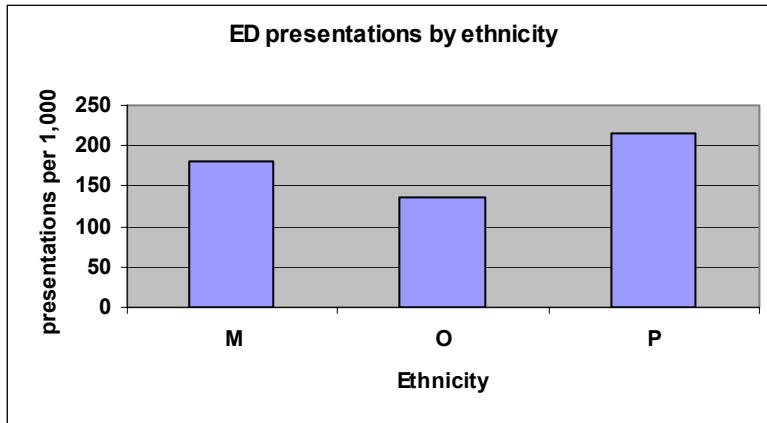


Data source: Ministry of Health

4.5.5 Emergency department attendances

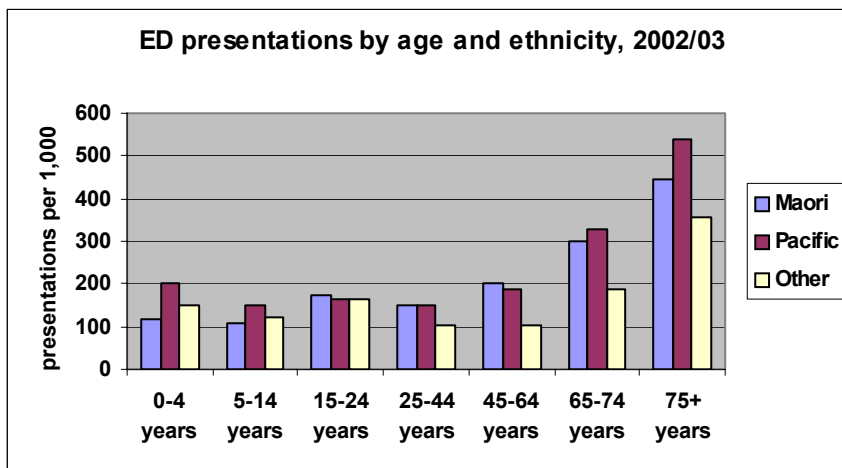
The graphs below show emergency department attendances at Wellington and Keneperu Hospitals for 2002/03. Rates are age standardised to the total Capital and Coast population.

ED attendances by ethnicity, C&C DHB, 2002/03

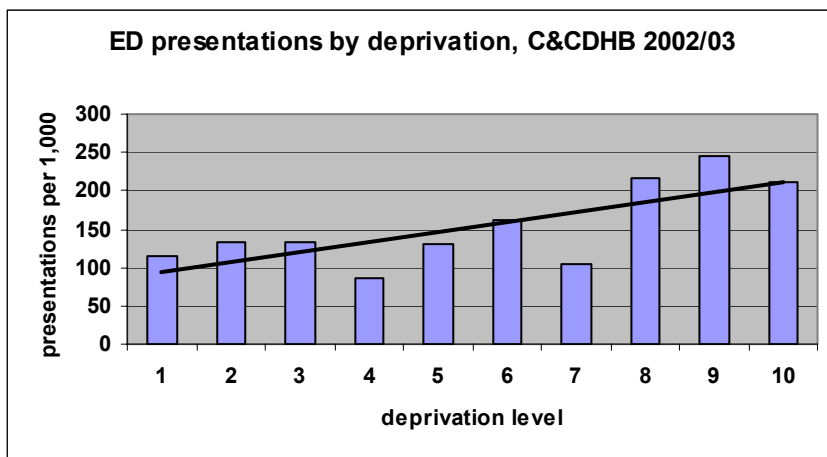


Overall, Maori and Pacific have a higher rate of ED attendances than people of other ethnicities. However, the patterns are slightly different for different age groups. For children aged 0-14 years, Pacific have the highest rate, followed by Other. Youth aged 14-24 have similar rates across all ethnic groups. Maori and Pacific adults (25+ years) have higher attendance rates than Other, and the rate increases with age.

ED attendances by age & ethnicity, C&C DHB, 2002/03



ED attendances by deprivation, C&C DHB, 2000/01-2002/03



The graph above shows a general trend of increasing ED attendance rate with increasing deprivation.

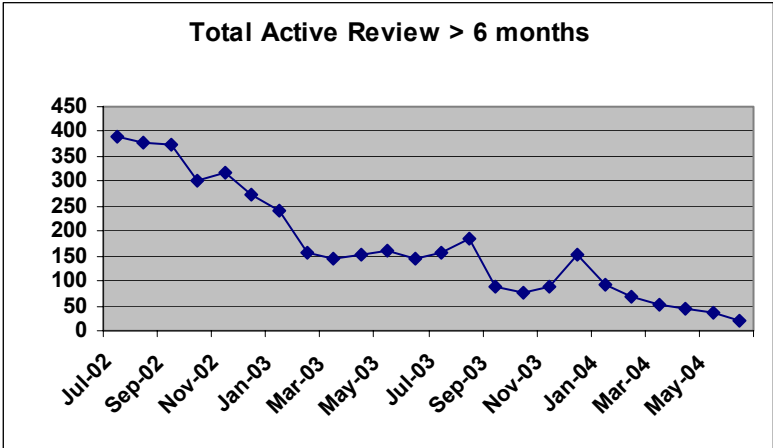
4.5.6 Waiting lists

The information in this section is for C&C DHB's provider arm and will therefore include patients from other DHBs. Similarly, some Capital and Coast residents will be on waiting lists at other DHBs.

4.5.6.1 Active review

Since July 2003 the number of patients waiting more than six months for access review has dropped by 87% or the equivalent of 135 reviews. At the end of June 2004 Capital & Coast DHB had 20 patients with an active review status across all specialties who had not been reviewed within the previous six months. 19 of these were in Ophthalmology.

Patients waiting more than six months for access review



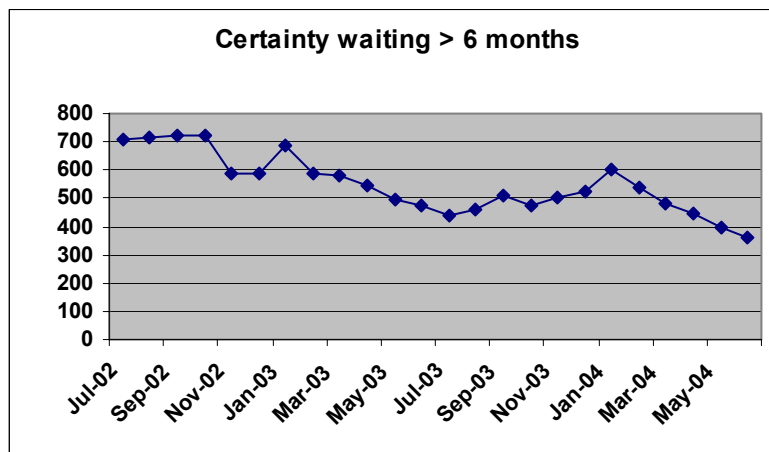
4.5.6.2 First Specialist Assessment

At 30 June 2004, there were 1285 patients waiting for First Specialist Assessment (FSA), who had been waiting longer than six months. This is the lowest it has been for 24 months.

4.5.6.3 Patients with certainty

The number of patients waiting longer than six months with certainty has fallen further to 362 at the end of June 2004. 86 of these patients were in Ophthalmology.

Number of patients who are offered publicly funded treatment and wait longer than six months



4.6 Maori

The following Maori specific services are purchased:

Residential alcohol and drug services

Primary health services

Support services for mothers and their pepi

Whanau ora services

Tamariki ora services including facilitation and whanau support

Kaupapa Maori mental health services

Maori health development

Kaupapa Maori diabetes education and management

Mobile nursing service

Services to improve access

Sexual health education

Outreach immunisation services

4.6.1 Whanau Ora Services

C&C DHB contracts 6 'By Maori for Maori' providers to deliver Whanau Ora services to individuals and their whanau. The expectation of Whanau Ora services is that they will contribute to the reduction in health inequalities, the 13 priority Population Health Objectives and the Maori health gain objectives. Whanau Ora provides services that impact on well being with Whanau at the center of care.

4.6.2 Tamariki Ora Services

Child health is a priority area for Maori. Tamariki Ora services aim to deliver proactive care, support and management to Tamariki and their whanau. It is the aim of C&C DHB to grow this service in line with the National Well Child Framework.

4.6.3 Kaupapa Maori Diabetes Education and Management

C&C DHB have funded the establishment of two Kaupapa Maori Diabetes Education and Management services in Kapiti and Wellington. This initiative targets the management of Diabetes Type 2, with whanau at the centre of care. Education is aimed at whanau, acknowledging whakapapa links, pro-active self-management and healthy lifestyle options congruent with Maori values/lifestyle.

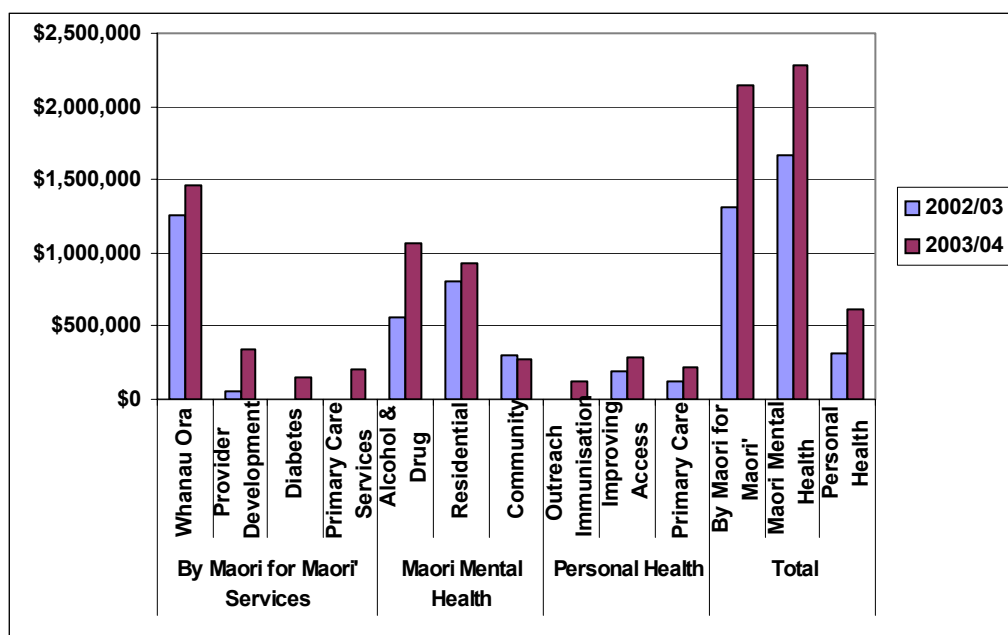
4.6.4 Maori Health Development

C&C DHB have established a Maori Health Development fund. The main objective of this fund is to improve the capacity and capability of 'By Maori for Maori' providers and the services they deliver.

4.6.5 Support services for mothers and their pepi

C&C DHB fund this service to deliver support and care to mothers and their pepi in the high risk category delivered to a diverse Maori population throughout the district. The service includes antenatal maternity / post natal, support for new mothers and is delivered by a Maori Midwifery service.

Expenditure for 2002/03 – 2003/04



Source: C&C DHB Managers Summary YTD July 2003³³, C&C DHB Managers Summary 2003/04³⁴

Expenditure for 'By Maori for Maori' and 'Maori Specific' services has increased by 53% between 2003 and 2004. These amounts do not include expenditure in Hospital & Health Services and Mainstream services.

4.7 Pacific

The following Pacific specific services are purchased:

- Mental health services
- Primary care facilitation
- Well child facilitation
- Services to improve access

³³ Total Maori (NGO) expenditure 2002/03 \$3,292,694.00

³⁴ Total Maori (NGO) expenditure 2003/04 \$5,052,750.00

General medical services
 Community alcohol and drug services
 Community support workers
 Youth health services

4.7.1 Workforce³⁵

4.7.1.1 Capital & Coast DHB Pacific workforce

Pacific people represent 5% of the total C&C DHB workforce. The following table shows the split between the various workforce categories.

Pacific workforce in C&C DHB

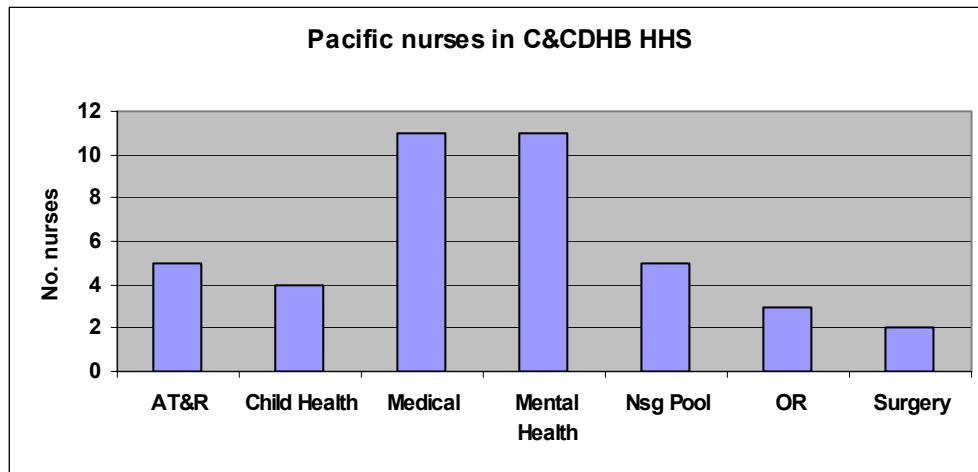
Workforce category	C&C DHB	Pacific	% Pacific
Medical	558	6 (3%)	1%
Nursing	2041	41 (19%)	2%
Allied Health	687	7 (3%)	1%
Support Personnel	151	123 (56%)	82%
Management/Admin	865	40 (18%)	5%
Directors/Advisory Members	79	1 (1%)	1%
Total Workforce	4381	218	5%

Note: The categories that have been used influence the data

Pacific people account for only 1% of medical staff. 56% of Pacific people working for C&C DHB are Support Personnel, and they account for 82% of Support Personnel staff. 19% of Pacific people working for C&C DHB are Nurses. Pacific nurses account for only 2% of the total Capital and Coast nursing staff. Over half of all Pacific nurses are employed in Medical and Mental Health services.

³⁵ C&C DHB, Pacific Workforce Future Hope – Future Gain, Draft, 2004

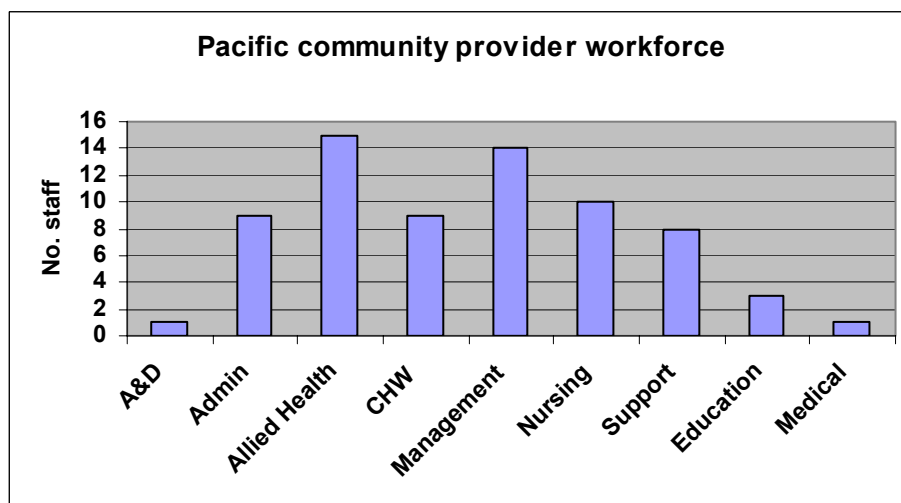
Pacific nurses in C&C DHB Hospital & Health Services



4.7.1.2 Pacific community providers

There are 70 workers across five Pacific community providers. The distribution of these workers by service category is shown in the graph below.

Pacific workforce across community providers in C&C DHB



4.8 Public Health

Public health is defined as "the science and art of preventing disease, prolonging life, and promoting health through the organised efforts of society".

Although C&C DHB does not currently hold funding responsibility for all public health services, Public Health is a critical part of the mix of services that will achieve Capital and Coast's strategic priorities. Most contracting for public health services is managed from the Ministry of Health but the DHB funds some innovative and local public health activity both directly and through PHOs and NGOs.

Public health is as much about processes, strategies and paradigms (ways of working) as about programs and services. The range of activity described below reflects the integration

and adoption of public health approaches across the spectrum of C&C DHB's work programs. In addition C&C DHB co-operates with and supports the local implementation of a range of national programs (such as screening, communicable disease surveillance, prevention and management, de-stigmatisation of mental illness) and works with the Ministry of Health on joint planning.

To date the focus of C&C DHB has been on joint planning with Regional Public Health as the largest provider of public health services, but there is a wealth of public health work also being undertaken in the NGO sector.

4.8.1 Strategic Regional Public Health Plan

In 2003, the Board agreed the Regional Strategic Public Health Plan developed in collaboration with the Ministry of Health, Hutt Valley District Health Board and Wairarapa District Health Board. Priorities in the Plan were:

Tobacco control - building on the gains made in reduced use of tobacco products, promoting smokefree messages in communities and strengthening smoking cessation programs, particularly targeting Maori and Pacific populations.

Active lifestyles and nutrition - promoting active lifestyles and good nutrition practices to mitigate future risk of cardiovascular disease and diabetes, targeting Maori and Pacific populations.

Alcohol and drugs - particularly targeting young people.

Reducing inequalities - the following are priority public health areas:

- Maori communities - prioritise and invest in Maori community development and action ensuring Maori communities are strengthened and supported. Promote effective inter-sectoral collaboration and action.
- Pacific communities - the health status of Pacific populations has been identified by both C&C DHB and Hutt Valley DHB as a priority for public health action.
- Child and youth health - children and young people, particularly those living in poor communities, are priority populations. This is to ensure that inequalities are not perpetuated in future generations.

4.8.2 Joint Planning and Work

Joint planning or work is currently under way with Regional Public Health on:

Nutrition & Physical Activity

Social Environments – in particular joint planning around youth participation and youth health, interaction with local government and inter-sectoral activity in Porirua and Wellington South.

School Health – joint decision making about prioritising school health nurse activity and health promoting schools.

Youth health – including assisting in developing youth advisory group, mental health promotion.

Tobacco, alcohol and other drugs - C&C DHB has joined the Wellington Wairarapa Smokefree Forum which meets quarterly and is now actively engaged in the range of tobacco control activities undertaken or planned in the District. Recent amendments to Smokefree Environments, in particular prohibition of smoking in Licensed Premises, will come into effect in late 2004 and will further enhance tobacco control activities.

Pacific - fono hosted in late 2003 informed the priorities for Regional Public Health's work program. Priorities identified in this process aligned with those listed above, particularly child and youth health, tobacco control, nutrition and physical activity. vision hearing testers, health promotion and health protection professionals.

Maori public health - Maori specific actions are part of all workplans, but Maori workforce in public health has been identified as a priority for development.

Influenza Campaign - Hutt Valley and Capital & Coast jointly plan the campaign to promote the uptake of free influenza vaccinations by those aged over 65 years and people with chronic illnesses every winter.

Meningococcal campaign and National Immunisation Register Implementation

Oral Health - a comprehensive review of oral health for children, adolescents and low-income adults is in progress.

Communicable disease - as well as continuing to support normal activities in the work program, support is provided for managing outbreaks (such as the Norovirus outbreak in health care facilities).

Regional Public Health is leading work to reduce serious skin infection in children.

Rheumatic Fever - funding and service provision to ensure consistent uptake of monthly prophylaxis by young people between the age of 16 and 21 with rheumatic fever has been developed and a new outreach/support service has been established.

Regional Immunisation Coordinator - is supporting work stimulated by the maternity review, to improve coverage of Hepatitis B and BCG.

Falls prevention - a regional project to improve health of older people through encouraging and assisting the delivery of health promotion programs and activities to older people at most risk of reduced health and well being as a result of their socioeconomic position, ethnic identity, place of residence, gender and/or functional disability.

Youth health services - are being strengthened in the District, including health promotion services through a range of initiatives in school and community settings.

Mental health - a range of NGO and consumer-led initiatives to promote mental health and well being with and by people living with mental illness including mental health promotion initiatives (e.g. mentally healthy schools), a program to increase physical activity for Maori living with mental illness, and destigmatisation activities and program.

4.8.3 Public Health, PHOs and other providers

Primary Health Organisations are a new development contributing to the District's public health capacity and action. Each has health promotion programs and initiatives as well as taking a population health approach in the overall approach to improve the health of the population served and reduce inequalities.

Other service providers, particularly in primary care, contribute to public health services such as screening and promotion of healthy lifestyles, smoking cessation and sexual health. In these areas, the DHB is focussing on:

Increasing cervical and breast screening coverage.

Increasing smoking cessation services.

Improving breastfeeding rates.

Improving recognition of family violence and improving intervention.

Reducing youth suicide.

In addition a range of public health providers support implementation of the Health of Older People Strategy through programs such as falls prevention and health promotion about positive ageing.

4.8.4 Inter-sectoral work on Public Health

Work that is taking place on public health issues in conjunction with other sectors includes:

Joint project with Work & Income and several NGOs to improve income and employment and reduce ethnic disparities.

PATHS project with the Ministry of Social Development and Work and Income.

Working with iwi and Maori communities to achieve better health outcomes.

Working with Pacific leaders, churches and communities to improve Pacific health.

Porirua Intersectoral Action for Community Health (ICAH).

Kapiti Community Health Group Trust (including Kapiti Healthlinks).

Joint action with local government (Wellington City Council, Porirua City Council, Kapiti District Council, Wellington Regional Council) on community development, transport and other shared issues of concern.

Collaboration with Housing New Zealand on Porirua's Housing and Community Renewal project.

Inter-sectoral worker in Wellington South.

Working with schools and communities through School health services and clinics, Health Promoting Schools and directly on joint projects.

Chapter 5: Priority Areas

5.1 Introduction

5.1.1 Priority areas

The New Zealand Health and Disability Strategy identifies thirteen priority areas. These are:

Cardiovascular	Reduce suicide
Reducing cancer	Well Child
Reducing diabetes	Alcohol and drugs
Reduce smoking	Oral health
Reduce obesity	Reduce violence
Improve nutrition	Severe mental illness
Physical activity	

Whakatataka, The Maori Health Action Plan sets out twelve Maori health priorities which are fairly closely aligned to the New Zealand Health and Disability objectives. Also included in these are injury prevention, hearing, asthma and disability support services.

The Pacific Health and Disability Action Plan sets six priority areas for Pacific people. These are: Pacific child and youth health, promoting healthy lifestyles and wellbeing, primary care and preventive services, Pacific provider and workforce development, promoting participation of disabled Pacific people, and Pacific health and disability information and research.

5.1.2 Mortality and morbidity

Leading causes of mortality and morbidity in C&C DHB

Age group	Mortality	Morbidity
<1 year	Perinatal conditions 39% Congenital abnormalities 25%	Perinatal conditions 46% Respiratory conditions 11%
1 to 19 years	Injury and poisoning 70% Cancer 10%	Injury and poisoning 16% Respiratory conditions 15%
20 to 39 years	Injury and poisoning 54% Cancer 17%	Injury and poisoning 8% Genitourinary diseases 7%
40 to 59 years	Cardiovascular disease 41% Cancer 33%	Cancer 13% Cardiovascular disease 11%
60 to 79 years	Cardiovascular disease 42% Cancer 35%	Cardiovascular disease 23% Cancer 15%
80 years and over	Cardiovascular disease 51% Cancer 17% / respiratory conditions 17%	Cardiovascular disease 24% Injuries (mostly from falls) 12%

Data source: Ministry of Health

The table above gives a picture of the big problem areas for different age groups. In children and young adults, injury and poisoning is the leading cause of death and admission to hospital. The major conditions affecting people aged 40 and over are cardiovascular disease and cancer. Note that when interpreting the figures in this chapter you should bear in mind issues discussed in chapter two such as access to services.

5.2 Cardiovascular

5.2.1 Overview

5.2.1.1 Mortality

Cardiovascular conditions account for 40.3% of all deaths and a third of avoidable deaths in the Capital and Coast district.

Males die from cardiovascular disease at an earlier age than females.

Deaths from ischaemic heart disease are declining at an average rate of 4.4% per year.

Between 1994 and 2000, deaths from stroke decreased at an average rate of 2.6% a year.

5.2.1.2 Hospital discharges

Cardiovascular conditions affect Maori and Pacific people at an earlier age than people in the Other ethnic group.

The angina discharge rate for Maori living in Porirua is almost twice the district rate of discharges. For Pacific people in Wellington the rate is 35% higher the district rate.

Stroke is a particular problem for Pacific people with 2 to 3 times the district rate of hospital discharges.

Maori discharge rates for myocardial infarction are 20 to 70% higher than the district rate. Pacific rates are 50 to 70% higher than the district rate.

The standardised discharge ratio for acute myocardial infarction has increased for all groups except Other in the C&C DHB district. The standardised discharge ratios for all groups are higher than the national ratios.

Heart failure appears to be a particular problem for Maori and Pacific people with 2½ to 3½ times the district rate of hospital discharges. Pacific people in Porirua have an even higher rate of discharges.

The standardised discharge ratio for chronic rheumatic heart disease for C&C DHB district is higher than the New Zealand rate and is increasing.

5.2.1.3 Pharmaceuticals

There has been a steep increase in the number of lipid modifying agents being prescribed since 2002.

5.2.2 Background

Nationally, cardiovascular conditions are the single largest cause of burden of disease³⁶. They are also the leading cause of death for people aged 40 and over. While mortality rates are declining, they are not declining as fast as in some other developed countries³⁷.

Cardiovascular conditions include ischaemic heart disease (IHD), rheumatic heart disease, cerebrovascular disease, stroke, and other forms of vascular and heart disease.

Cardiovascular health is promoted by a wide range of measures.

Primary prevention aims to reduce the risk of cardiovascular events for people with no evidence of cardiovascular disease. The major modifiable risk factors for cardiovascular disease are smoking, hypertension, high serum cholesterol, diabetes, obesity, exercise and diet³⁸. Primary prevention has been credited with a third of the decline in mortality across the USA, and 50% of the potential decline in New Zealand³⁹.

Treatment at the time of a cardiovascular event has been credited with a third of the decline in cardiovascular mortality in the United States³⁷. This includes emergency services, coronary surgery, and inpatient pharmaceuticals.

Secondary prevention is the long-term management of people who have existing cardiovascular disease (angina, previous myocardial infarction or stroke), who have had a cardiovascular event, or who have had a coronary surgical procedure³⁸. This includes care delivered in both the primary and secondary care sectors, as well in as long-term residential care.

The following sections contain an analysis of cardiovascular health in the Capital and Coast district.

5.2.3 Mortality

In 2000, 40.3% of all deaths in the Capital and Coast district were from cardiovascular conditions. Of all deaths that were avoidable, a third were from cardiovascular conditions. The cardiovascular mortality rate in C&C DHB (247 deaths per 100,000 population) is slightly below the national rate (292 deaths per 100,000 population).

Ischaemic heart disease, heart failure and stroke account for 75% of cardiovascular deaths. Trends in mortality rates for these conditions are shown in the graph below.

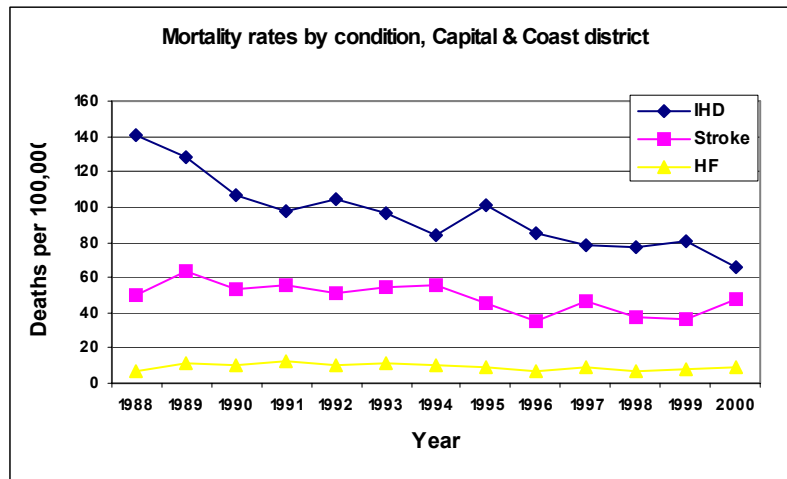
³⁶ Our Health, Our Future

³⁷ **Weinstein et al.**

³⁸ NZ Health Strategy: DHB Toolkit Cardiovascular. Ministry of Health 2001.

³⁹ Jackson R

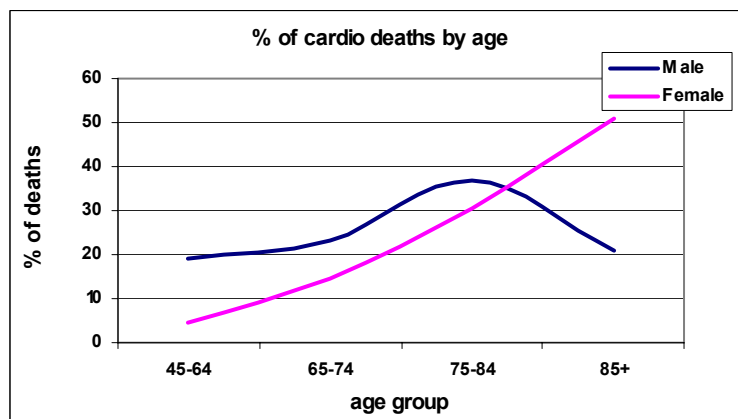
Trends in mortality rates by cardiovascular condition, C&C DHB 1988-2000



Data source: Ministry of Health

Deaths from ischaemic heart disease are declining at an average rate of 4.4% per year. In the years from 1994 to 2000, deaths from stroke declined at an average rate of 2.6% per year. Deaths from heart failure do not appear to be increasing or decreasing significantly.

Cardiovascular mortality rates by age & gender, C&C DHB 2000



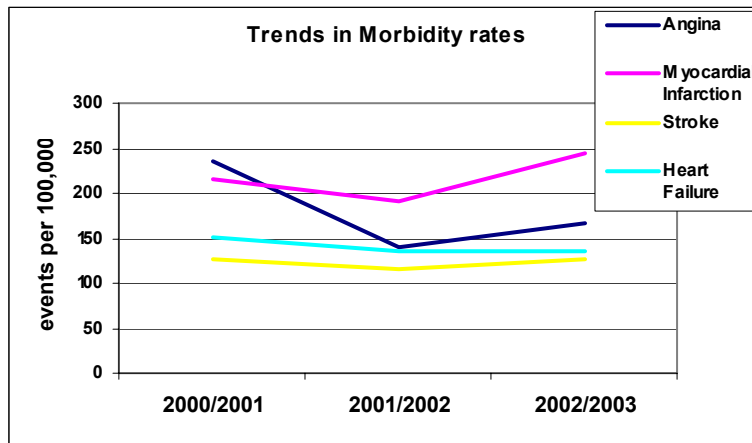
Data source: Ministry of Health

Males have a higher mortality rate from cardiovascular conditions than women. The graph above also shows that males die from cardiovascular disease at an earlier age than females.

5.2.4 Morbidity

The main cardiovascular conditions for which people are admitted to hospital are myocardial infarction, angina, heart failure and stroke. Standardised discharge ratios have been calculated for these conditions using an indirect method. For most conditions Maori and Pacific rates have been extrapolated from a small number of yearly discharges so should be interpreted cautiously.

Morbidity rates by condition, C&C DHB 2000/01 – 2002/03



Data source: Ministry of Health

Heart failure discharges appear to be decreasing slowly. Discharges for angina and myocardial infarction have fluctuated and therefore we cannot predict trends. Stroke discharges have shown no significant increase or decrease.

5.2.4.1 Angina

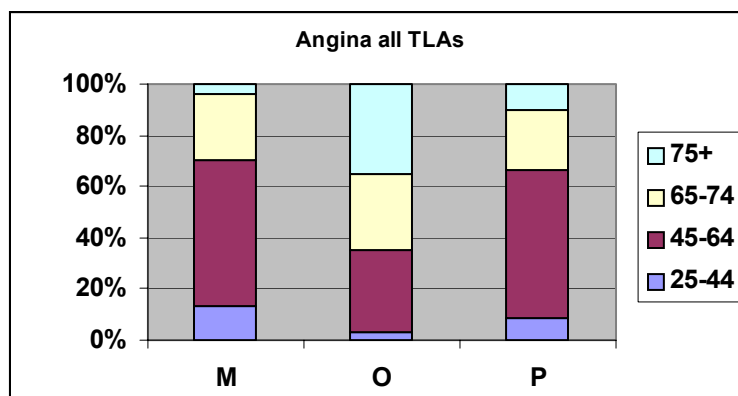
Angina standardised discharge ratios 2002/03

SDR	Kapiti	Porirua	Wellington
Maori		1.98	1.40
Pacific		0.91	1.35
Other	1.10	1.05	0.91

Data source: Ministry of Health

Maori rates are above the district rate for angina. Maori living in Porirua have almost twice the district rate of discharges. Angina discharges for Pacific people in Wellington are 35% higher than for the district population.

Angina discharges by age and ethnicity 2000/01-2002/03



Data source: Ministry of Health

Around 70% of Maori and Pacific people admitted for angina are aged under 65. In comparison, only 35% of people of other ethnicities are aged under 65. In the Other ethnic group, nearly 40% of discharges are people aged 75 and over.

5.2.4.2 Stroke

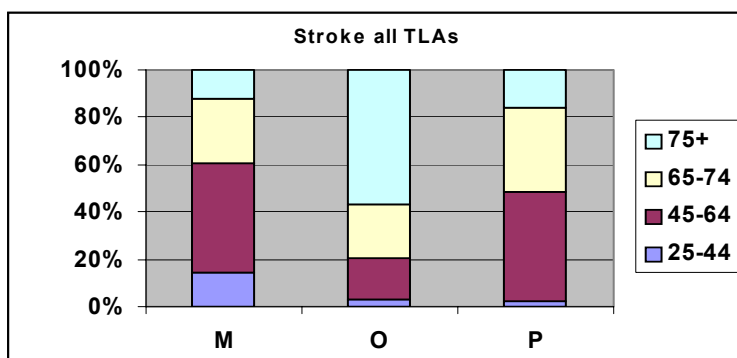
Stroke standardised discharge ratios 2002/03

SDR	Kapiti	Porirua	Wellington
Maori		1.38	0.86
Pacific		3.10	2.55
Other	0.93	1.16	0.87

Data source: Ministry of Health

Stroke is a particular problem for Pacific people, who have around 2 to 3 times the district rate of discharges. All ethnic groups in Porirua have discharge ratios for stroke above the district rate.

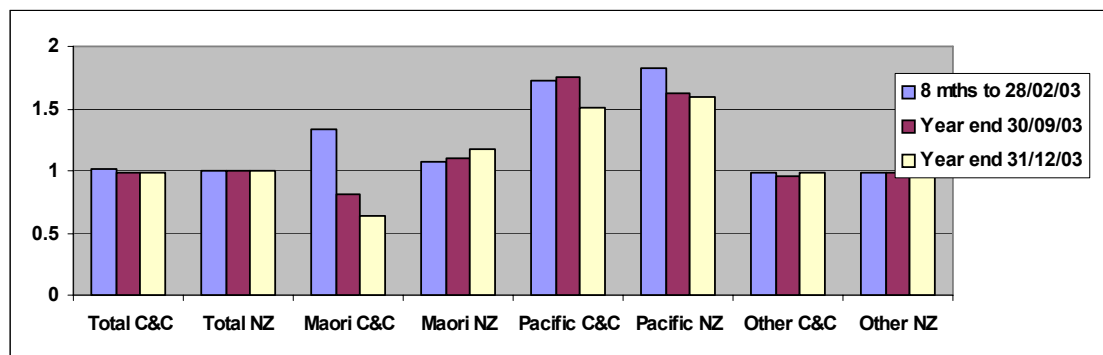
Stroke discharges by age and ethnicity 2000/01-2002/03



Data source: Ministry of Health

Stroke affects Maori and Pacific people at a much younger age than people of other ethnicities. Over 60% of Maori discharges and half of Pacific discharges are for people aged under 65. Only 20% of discharges in the Other ethnic group are for people under 65. People aged 75 and over account for over half the discharges in the Other ethnic group.

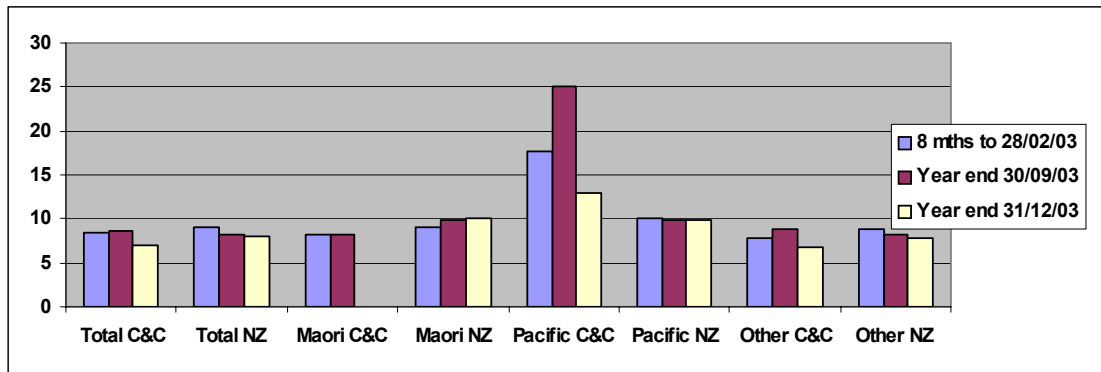
Trends in stroke discharges compared to National rates



Data source: Ministry of Health

The standardised discharge ratio for stroke for people aged 55 and over (above) in the C&C DHB district is similar to the national rate. The C&C DHB ratio has decreased for Maori and Pacific, but is steady for the Other ethnic group. Overall ratios are slightly below national rates. Repeat discharges for stroke (below) are slightly lower than the national rates and have decreased for Pacific and Other. Note that repeat discharges for Maori have not been reported in the last time period meaning that the actual number of discharges was less than 5.

Trends in repeat discharges for Stroke age 55 and over



Data source: Ministry of Health

5.2.4.3 Myocardial Infarction

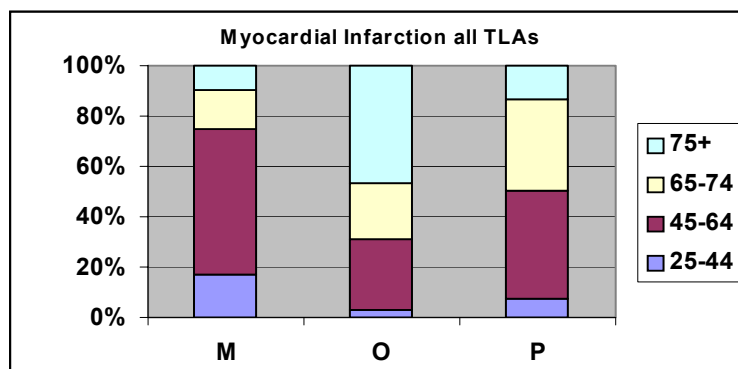
Myocardial infarction standardised discharge ratios 2002/03

SDR	Kapiti	Porirua	Wellington
Maori		1.69	1.20
Pacific		1.50	1.69
Other	1.06	0.63	0.92

Data source: Ministry of Health

Myocardial infarction discharge rates for Maori are 20% higher in Wellington and 70% higher in Porirua than the district rate. For Pacific people living in Porirua the discharge rate is 50% higher, and 70% higher for people living in Wellington, than the district rate. The Other ethnic group appears to have a particularly low rate in Porirua.

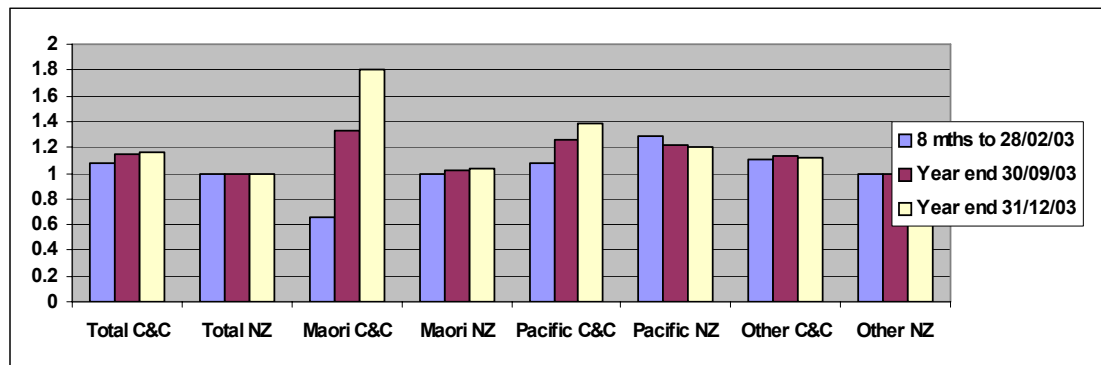
Myocardial Infarction discharges by age and ethnicity 2000/01-2002/03



Data source: Ministry of Health

Over 70% of Maori admitted for myocardial infarction are aged under 65. Half of Pacific discharges are for people under 65, although the figure is slightly higher in Porirua. In the Other ethnic group only 30% of discharges are for people aged under 65 and almost half are people aged 75 and over.

Trends in discharges for Acute myocardial infarction compared to national



Data source: Ministry of Health

The standardised discharge ratio for acute myocardial infarction is higher than the national ratio and has increased for all groups except Other in the C&C DHB district. The ratios for all groups are higher than the national ratios. Some of the increase in acute myocardial infarctions may be due to a change in the way these are diagnosed.

5.2.4.4 Heart Failure

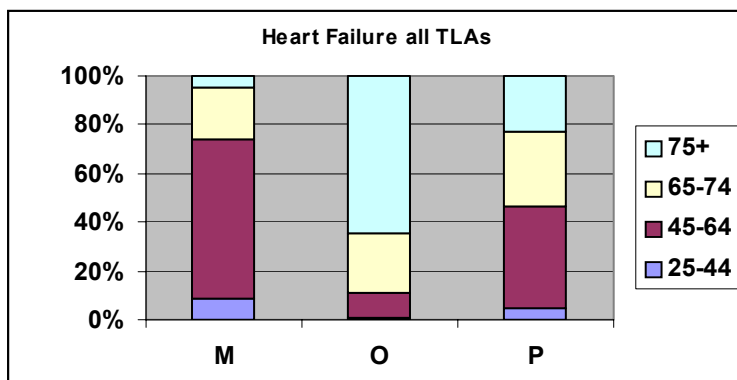
Heart failure standardised discharge ratios 2002/03

SDR	Kapiti	Porirua	Wellington
Maori		5.34	2.77
Pacific		2.53	3.57
Other	0.84	1.00	0.83

Data source: Ministry of Health

Heart failure is a particular problem for Maori and Pacific people with 2½ to 3½ times the district rate. In Porirua, Maori have 5 times the rate of discharges for heart failure as the district as a whole.

Heart Failure discharges by age and ethnicity 2000/01-2002/03

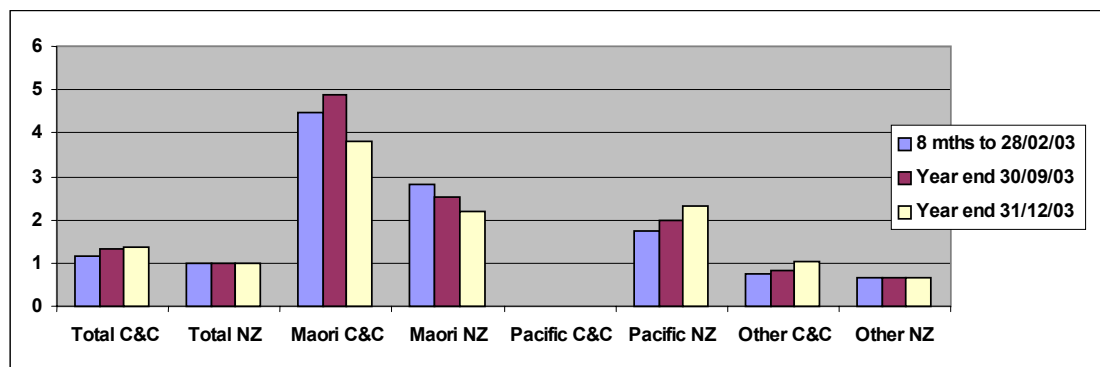


Data source: Ministry of Health

70% of Maori discharges for heart failure and over 40% of Pacific discharges were for people under 65. In comparison, only 10% of discharges in the Other ethnic group are for people aged under 65. Over 60% of people admitted in the other ethnic group are aged 75 and over.

5.2.4.5 Chronic rheumatic heart disease

Chronic rheumatic heart disease standardised discharge ratios



Data source: Ministry of Health

The standardised discharge ratio for chronic rheumatic heart disease for C&C DHB district is higher than the New Zealand rate and is increasing. Within this however, the ratio for Maori has decreased.

5.2.5 Avoidable hospitalisations⁴⁰

Angina and ischaemic heart disease are the top two conditions for avoidable hospitalisations for people over 45 in C&C DHB. They account for 9.7% of all hospitalisations in the 45-64 age group and 11.2% of all hospitalisations in the 65-74 age group.

Cardiovascular avoidable hospitalisations, 2002/03

Condition	Rate per 10,000 population	
	Capital & Coast	National
Angina	24	48
Ischaemic heart disease	20	23

Data source: TAS

Capital and Coast is below the national rate for both angina and ischaemic heart disease discharges. The district angina discharge rate is significantly lower than the national rate. C&C DHB is the only central region DHB with lower than the national rate for hospitalisations due to ischaemic heart disease.

It should be noted that statistical error is inherent in the methodology for calculating avoidable hospitalisations.

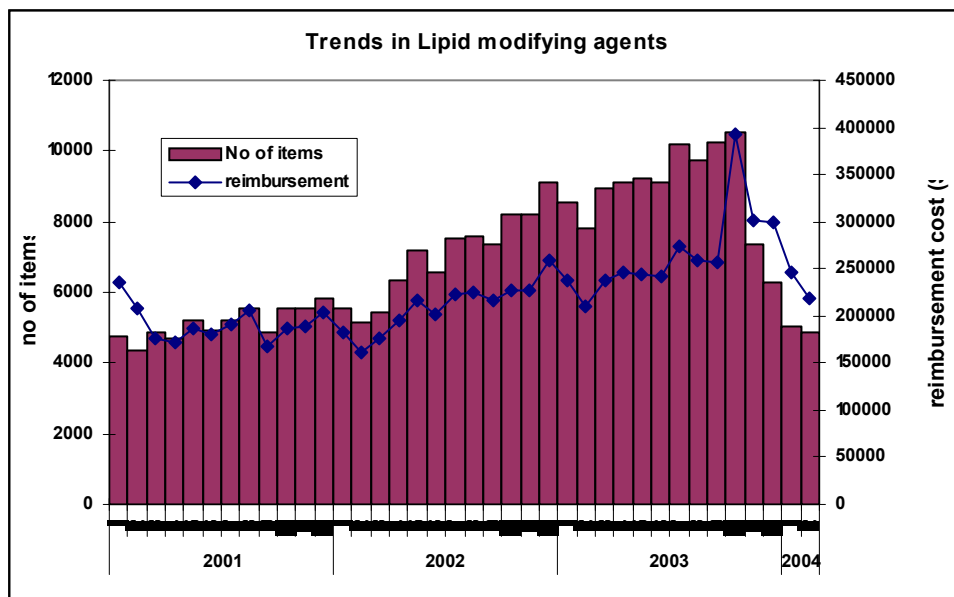
40 TAS, Avoidable hospitalisations report for central region DHBs, April 2004

5.2.6 Pharmaceuticals

Pharmaceuticals in the cardiovascular category make up 10.2% of Capital & Coast's total community pharmaceutical expenditure. Most of the expenditure in the cardiovascular category is on pharmaceuticals for blood pressure and heart failure.

Pharmaceuticals in the blood and blood-forming category make up 8.4% of Capital & Coast's total community pharmaceutical expenditure. Almost three-quarters of the blood and blood-forming group are lipid modifying agents which are used to control cholesterol. High cholesterol is a contributing factor in the onset of cardiovascular disease. The lipid modifying agents are dominated by statins (83%).

Volume and cost to DHB of lipid modifying agents, C&C DHB, 2001-2004



Data source: NZHIS Pharmhouse

There has been a steep increase in the number of lipid modifying agents being prescribed since 2002. The drop in numbers from October 2003 is due to the stat dispensing change, meaning that 3 months supply may be dispensed in 1 lot (item).

Note that due to issues with NHI attached to prescriptions in the data warehouse, further analysis by TLA and ethnicity is not possible at this stage. It may be possible to do this sort of analysis in the future.

5.3 Cancer

5.3.1 Overview

5.3.1.1 *General*

In 2000, the overall rate of cancer registration for New Zealand was 4.7 per thousand of population. For C&C DHB it was 4.4 per thousand of population.

Cancer accounts for 28.2% of all deaths and 47.3% of avoidable deaths in C&C DHB.

Cancer accounts for almost half of all deaths for people age 50 to 65 years.

5.3.1.2 *Breast cancer*

Breast cancer mortality had been declining but has increased from 1995 onwards.

Registrations of breast cancer have increased at an average rate of 4% a year.

Maori women have a breast cancer discharge rate 40-55% higher than district rate.

Maori women in C&C DHB have reduced breast screening coverage, and Pacific women are significantly less likely to be screened.

5.3.1.3 *Lung cancer*

Maori living in Wellington have a lung cancer discharge rate twice the district and Maori living in Porirua have 3 times the district rate.

Lung cancer registrations for Pacific people are 79% higher than the district rate and registrations for Maori are 2½ times the district rate.

In the years from 1991 to 2000 lung cancer registration rates decreased by 4%.

Between 1988 and 2000 lung cancer mortality decreased 11%.

5.3.1.4 *Colo-rectal & prostate cancer*

The Other ethnic group have 48-60% more discharges for colo-rectal cancer than the district as whole.

Between 1988 and 2000 colo-rectal cancer mortality decreased 13%.

Prostate cancer registrations have seen a dramatic increase, tripling in the years from 1991 to 2000.

Between 1988 and 2000 deaths from prostate cancer increased at an average rate of 5% a year.

5.3.1.5 *Cervical screening*

There is a trend for increasingly lower cervical screening coverage⁴¹ after 45 years of age.

⁴¹ The coverage rate is the proportion of women who have had a cervical smear recorded on the National Cervical Screening Programme (NCSP) Register in the 36 months prior to the end of the reporting period.

Screening coverage amongst Maori women was 49% and amongst Pacific women was 37%. The target is 85%.

5.3.2 Background

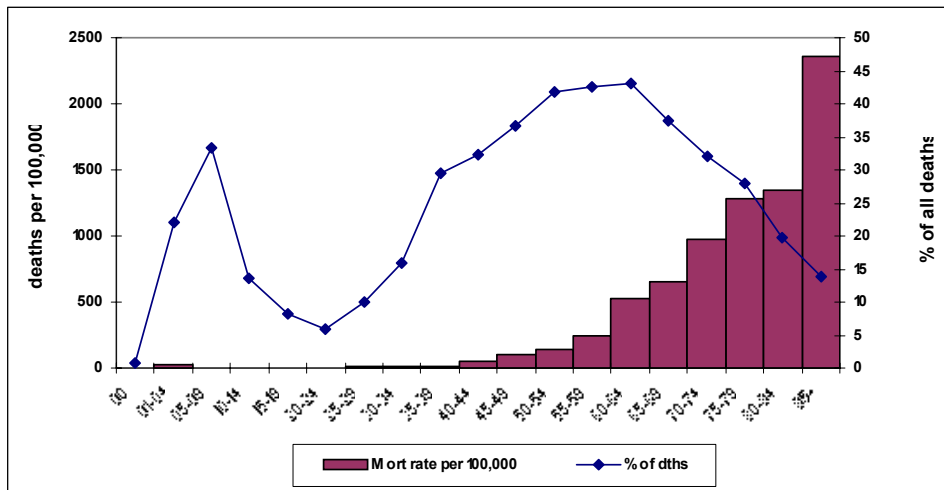
Cancer creates the second-largest burden of disease in New Zealand of any condition. In non-Maori populations, its burden of disease is very similar to that from cardiovascular conditions.

Reducing the incidence and impact of cancer is one of the New Zealand Health Strategy's thirteen priorities.

5.3.3 Mortality

In 2000, cancer accounted for 28.2% of deaths in the Capital and Coast district. In some age groups, it accounts for nearly half of all deaths. 47% of avoidable deaths in the district were due to cancer.

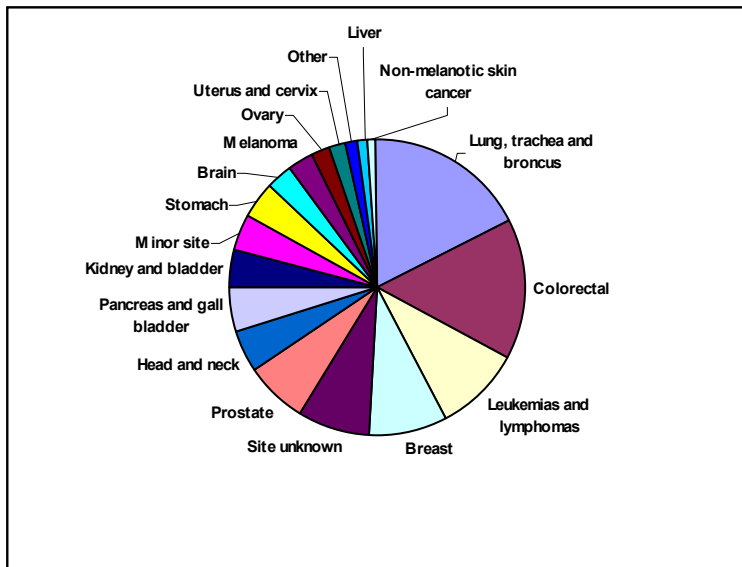
Cancer mortality rates and proportion of all deaths, C&C DHB, 1988-2000



Data source: Ministry of Health

Cancer accounts for nearly half of all deaths in people aged 50 to 65 years. The mortality rate from cancer increases with age.

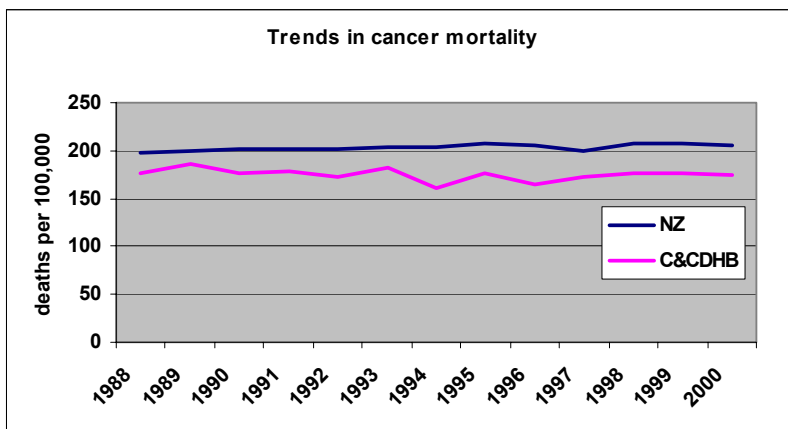
Cancer deaths by site, C&C DHB 1988-2000



Data source: Ministry of Health

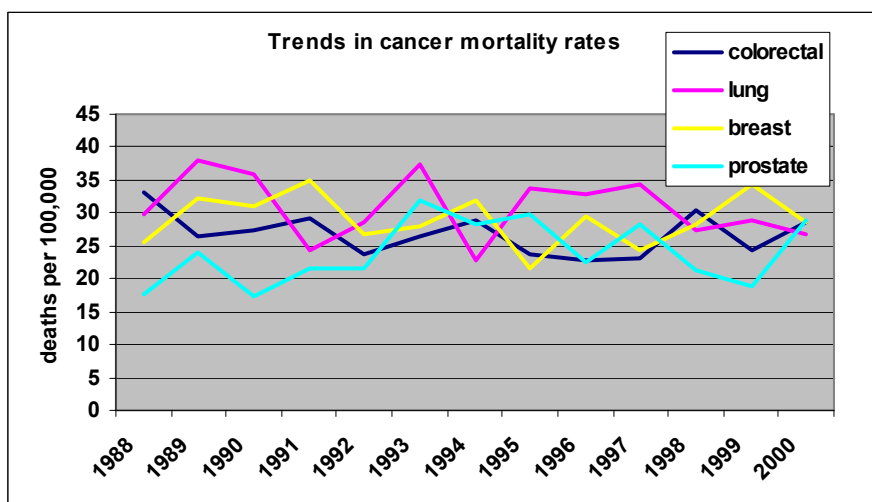
Many types of cancer feature in Capital and Coast’s mortality statistics. The leading cancers in order of prevalence are lung cancer, colo-rectal, leukemias and lymphomas, breast cancer and prostate cancer.

Trends in cancer mortality 1988-2000



Data source: Ministry of Health

Trends in cancer mortality by site, C&C DHB, 1988-2000



Data source: Ministry of Health

Deaths from lung and colo-rectal cancer are decreasing. In the years from 1988 to 2000, lung cancer mortality declined by 11% and colo-rectal cancer mortality declined by 13%. Deaths from prostate cancer are increasing. Between 1988 and 2000, the prostate cancer mortality rate increased at an average rate of 5% a year. Breast cancer deaths had been declining, however they have shown an increase in more recent years.

In the early 1980s colo-rectal cancer mortality rates for Maori were only one third (females) to two-thirds (males) of Other rates. However, a New Zealand mortality study⁴² has shown that small decreases in mortality rates for Other over the last 20 years and increasing rates amongst Maori, have resulted in similar colo-rectal cancer mortality rates by the late 1990s. Rates are imprecise for Pacific people because of the small number of deaths for this group, but it appears that the increase is even larger for this group.

5.3.4 Morbidity

Standardised discharge ratios for breast cancer 2000/01 – 2002/03

SDR	Kapiti	Porirua	Wellington
Maori		1.40	1.54
Pacific		0.80	1.92
Other	1.01	1.02	0.92

Data source: Ministry of Health

Women in the Other ethnic group have a discharge rate for breast cancer close to the district rate. Maori women have a discharge rate 40-55% higher than the district rate. Pacific women in Wellington also have a high rate of discharges.

⁴² Ajwani, Blakely et. Al. (2003) Decades of Disparity: Ethnic mortality trends in New Zealand 1980-1999

Standardised discharge ratios for prostate cancer 2000/01 - 2002/03

SDR	Kapiti	Porirua	Wellington
Maori			
Pacific		2.55	
Other	1.10	0.97	0.93

Data source: Ministry of Health

Standardised discharge ratios (SDRs) have not been calculated for Maori as there are too few discharges to give a reliable result. For the Other ethnic group males in Kapiti have a slightly higher rate of discharges than the district rate. Pacific men in Porirua appear to have a high rate of discharges, however this has been extrapolated from only 11 discharges in a 3-year period.

Standardised discharge ratios for colo-rectal cancer 2000/01 - 2002/03

SDR	Kapiti	Porirua	Wellington
Maori			
Pacific			2.33
Other	1.60	1.50	1.48

Data source: Ministry of Health

For Maori and Pacific people there are very few yearly discharges for colo-rectal cancer. The discharge ratio for the Other ethnic group is 48 and 60% higher than for the district as a whole. Pacific people appear to have a high rate of discharges in Wellington, however this has been extrapolated from only 11 discharges in a 3-year period.

Standardised discharge ratios for lung cancer 2000/01 - 2002/03

SDR	Kapiti	Porirua	Wellington
Maori		3.05	2.23
Pacific			
Other	0.83	1.24	0.94

Data source: Ministry of Health

Maori have a consistently high rate of discharges for lung cancer. For Maori living in Wellington, discharge rates are twice the district rate. For Maori living in Porirua the rate is 3 times the district rate. There are very few yearly discharges for Pacific people so ratios have not been calculated. People in the Other ethnic group living in Porirua have discharge rate 24% higher than the district as a whole.

5.3.5 Cancer registrations

The New Zealand Cancer Registry was established in the Department of Health in 1948, and is now maintained by NZHIS as a register of all types of malignant neoplasms except basal and squamous cell skin cancers. The Cancer Registry Act 1993, which came into force in July 1994, requires pathology laboratories to supply the Registry with a copy of any pathology report with a diagnosis of cancer. Cancers reported on death certificates and incidental autopsy findings are also registered.

Since at least 1991 the Capital and Coast district has experienced lower rates of cancer registrations than New Zealanders as a whole. In 1991 our population had a relative risk of cancer registrations that was only 83% of the whole of New Zealand. Since that time the relative risk has increased until it was 93% of the whole of New Zealand in 2000. In 2000, the overall rate of cancer registration for New Zealand was 4.7 per thousand of population. For Capital and Coast residents it was 4.4 per thousand of population.

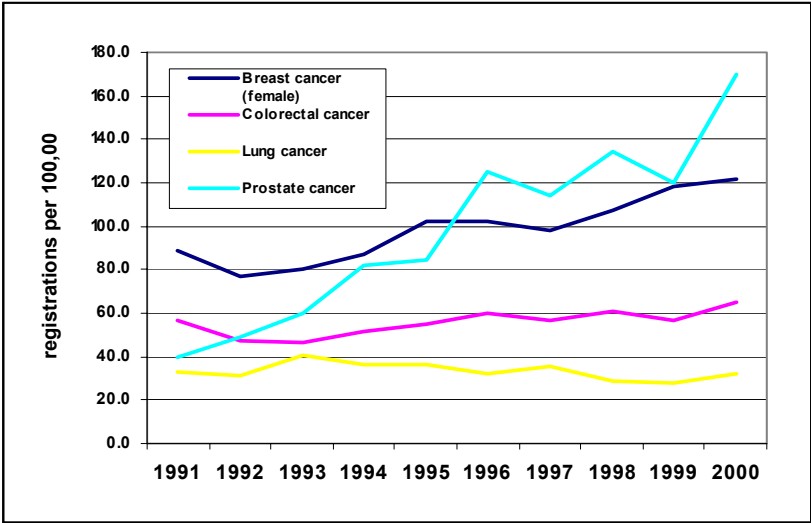
C&C DHB cancer registration rates compared with NZ rates, 2000

	C&CDHB	NZ	Relative risk C&CDHB/NZ
Prostate cancer	170.0	167.4	1.02
Breast cancer (female)	121.6	121.4	1.00
Colorectal cancer	64.4	67.4	0.96
Lung cancer	31.8	42.9	0.74

Data source: NZHIS New Zealand Cancer Registry

Registration rates for prostate cancer are increasing rapidly. In 1999 the relative risk of prostate cancer was only 0.8 (80%), but has increased to 1.02, meaning that males in C&C DHB have a slightly higher risk of prostate cancer than males nationally. Breast cancer remains at the New Zealand rate. Rates for colo-rectal and lung cancer are lower than national rates.

Trends in cancer registrations, C&C DHB, 1991-2000



Data source: NZHIS New Zealand Cancer Registry

Prostate cancer registrations have seen a dramatic increase, tripling in the years from 1991 to 2000. Registrations of breast cancer have increased at an average rate of 4% a year. Colo-rectal cancer rates are increasing slowly at an average rate of 1.7% a year. Registrations of lung cancer are slowly decreasing. In the years from 1991 to 2000 lung cancer registration rates decreased 4%. Lung cancer and cervical cancer are the only cancers whose registration rates are decreasing. All other types of cancer are increasing.

Standardised registration ratios, C&C DHB, 1998-2000

	Maori	Other	Pacific
Prostate cancer	0.19	1.03	0.93
Breast cancer	0.88	1.01	0.96
Colorectal cancer	0.63	1.04	0.4
Lung cancer	2.52	0.9	1.79

Data source: NZHIS New Zealand Cancer Registry

The table above shows age standardised registration ratios. The Other ethnic group is close to the district rate of registrations for all types of cancer. Maori and Pacific people have a high rate of registration for lung cancer. Registrations for Pacific people are 79% higher than for the district as a whole, and registrations for Maori are 2½ times the district rate. Maori have a particularly low rate of registration for prostate cancer at only 19% of the district rate. Both Maori and Pacific people have a low rates of registration for colo-rectal cancer.

5.3.6 Breast cancer screening⁴³

The overall goal of BreastScreen Aotearoa is to reduce the incidence of breast cancer by 30%. To achieve this a coverage rate of 70% of the eligible population screened every two years is required, converting to an annual goal of 35%.

Breast cancer screening, C&C DHB, 2001/02

	Ethnicity	Number screened	Eligible population	% screened
Porirua/Kapiti	Maori	172	516	33.3
	Pacific	78	582	13.4
	Other	2481	5571	44.5
Wellington	Maori	120	438	27.4
	Pacific	47	384	12.2
	Other	3175	10371	30.6
	Total	6073	17862	34.0

Breast cancer screening, C&C DHB, 2002/03

	Ethnicity	Number screened	Eligible population	% screened
Porirua/Kapiti	Maori	132	539	24.5
	Pacific	85	595	14.3
	Other	1695	5697	29.8
Wellington	Maori	91	462	19.7
	Pacific	54	407	13.3
	Other	2847	10691	26.6
	Total	4904	18391	26.7

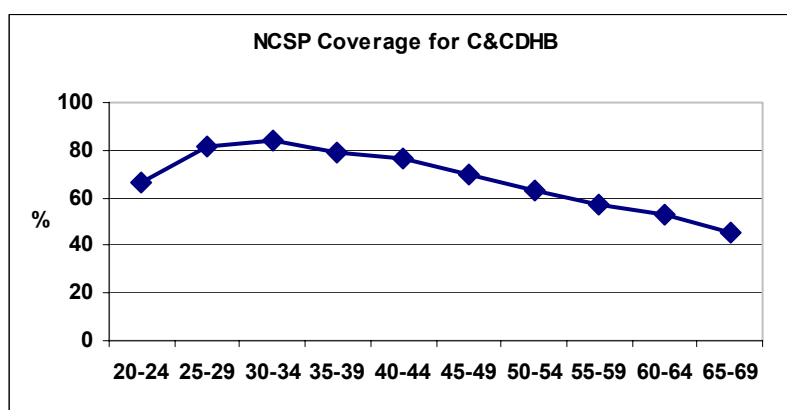
⁴³ Data source: C&C DHB, Review of Breast Screening in Capital and Coast District Health Board, February 2004

In the two financial years 2001/02 and 2002/03 overall breast screening coverage in C&C DHB was 34% and 27% respectively. In these two years the screening coverage for Pacific women ranged from 12 to 14%. For Maori, screening coverage ranged from 27 to 33% in 2001/02, and from 20 to 25% in 2002/03. Maori women in C&C DHB have reduced breast screening coverage, and Pacific women are significantly less likely to be screened. Despite this, breast cancer registration rates for Maori and Pacific women are lower than the national rate.

5.3.7 Cervical screening⁴⁴

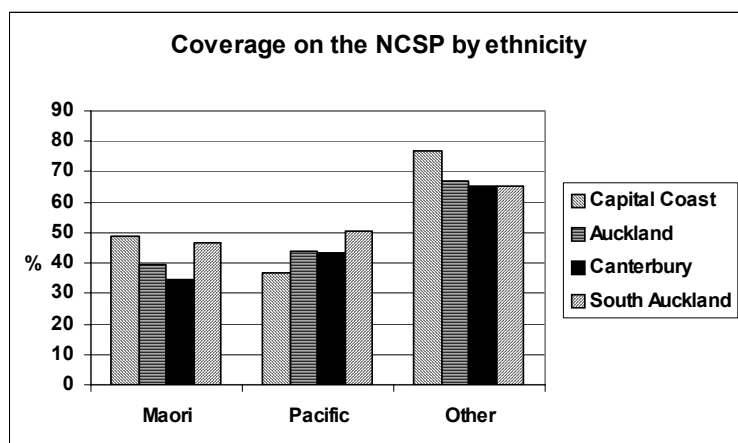
The coverage rate reported below is the proportion of women who have had a cervical smear recorded on the National Cervical Screening Programme (NCSP) Register in the 36 months prior to the end of the reporting period. Of all DHBs C&C DHB has the highest coverage rate at 80.3% (adjusted for hysterectomy). The target is 80% unadjusted and 85% adjusted for hysterectomy. The graph below shows that after 35 years of age, coverage decreases with age.

Women screened in the previous 36 months, C&C DHB, Jul-Sep 2001



Data source: University of Otago

Women screened in the previous 36 months by ethnicity, Jul-Sep 2001



Compared to other DHBs of a similar size, C&C DHB has a slightly higher rate of Maori who have had a smear within 36 months (48.8%), but a lower rate of Pacific coverage at 36.8%.

Data source: University of Otago

⁴⁴ Data source: C&C DHB, Review of Cervical Screening in the Capital and Coast District Health Board, November 2003 and is for women aged 20-69 years.

5.4 Diabetes

5.4.1 Overview

5.4.1.1 Mortality

In 2000 diabetes accounted for 3.7% of deaths in C&C DHB.

Mortality rates from diabetes are generally very low, however in the years from 1988 to 2000 the mortality rate increased at an average rate of 9% a year.

Mortality rates from diabetes for people aged 50-74 living in Porirua are generally twice those of Kapiti residents.

5.4.1.2 Morbidity

Morbidity from diabetes is increasing rapidly.

Discharge rates for people aged 45+ living in Porirua are at least twice that of people in Kapiti or Wellington.

Pacific people living in Porirua have nearly 5 times the district rate of discharges and Pacific people living in Wellington have over 3 times the district rate.

Maori living in Porirua have over 4 times the district rate of discharges for diabetes.

5.4.1.3 Diabetes indicators

The national Pacific discharge rate for vitrectomy is significantly higher than all other groups.

Maori and Pacific people have higher rates of lower limb amputation than people of other ethnicities.

5.4.2 Background

Diabetes presents a serious health challenge for New Zealand. It is a significant cause of poor health and premature death. Reducing the incidence and impact of diabetes is one of the New Zealand Health Strategy's thirteen priority areas.

Diabetes affects about 200,000 people in New Zealand although only half of these people have been diagnosed. The prevalence of diabetes in the New Zealand population is currently estimated at around 4%.⁴⁵

Diabetes is defined by abnormalities in the regulation of blood glucose levels, but it is a chronic condition with the potential to cause kidney failure, eye disease, foot ulceration and a higher risk of heart disease.

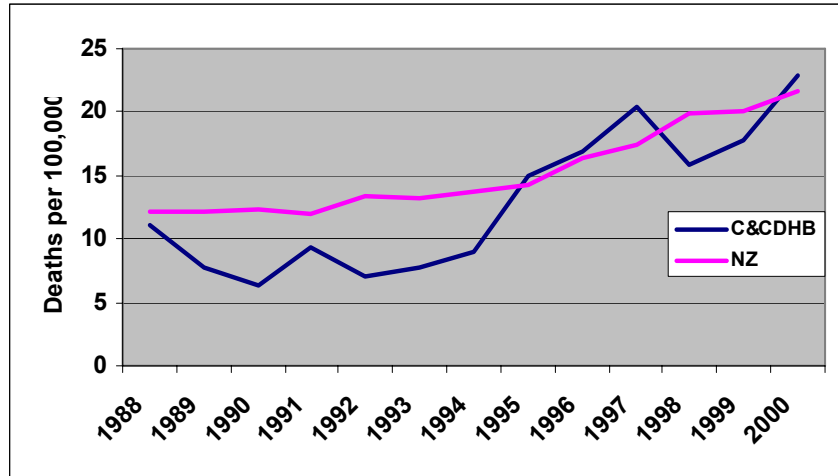
5.4.3 Mortality

In 2000 diabetes accounted for 3.7% of deaths in the Capital and Coast district. Mortality rates from diabetes are generally very low, however deaths directly attributed to diabetes are increasing rapidly. The mortality rate for 2000 was 23 deaths per 100,000 population. In the years from 1988 to 2000 the Capital and Coast mortality rate increased at an average

⁴⁵ MOH website diabetes home page

rate of 9% a year. Historically, the rate in C&C DHB has been below the national rate. However, in recent years the district rate has shown a more dramatic increase and is now above the national rate.

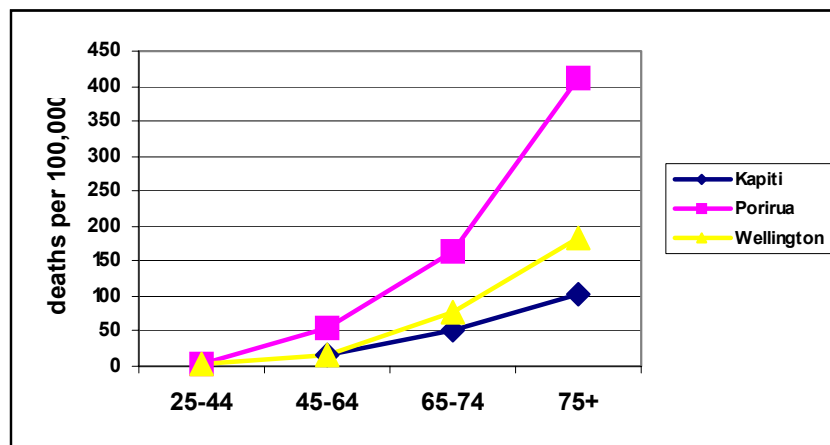
Diabetes mortality, C&C DHB compared to NZ, 1988-2000



Data source: Ministry of Health

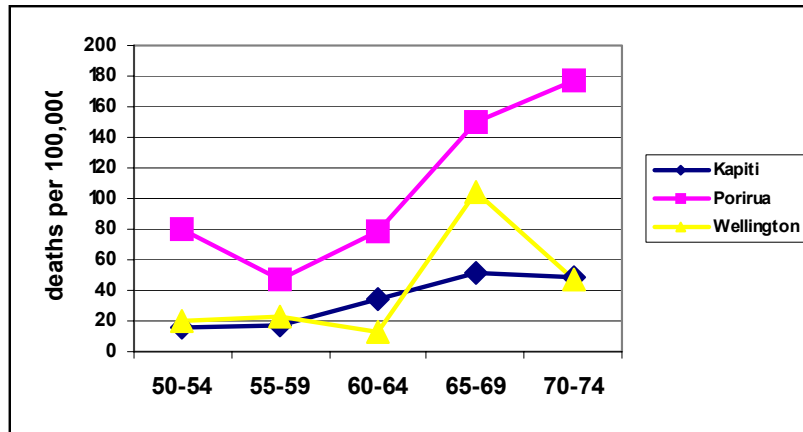
The chart below shows that the pattern of diabetes is different in each of Capital and Coast's three localities. Diabetes affects relatively more people in Porirua, and at an earlier age.

Diabetes mortality by TLA, 25+ years, 1998-2000



Data source: Ministry of Health

Diabetes mortality by TLA, 50-74 years, 1998-2000

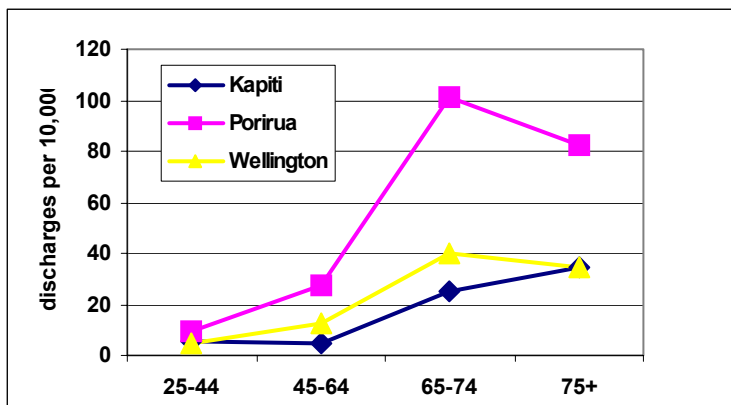


Data source: Ministry of Health

This chart zooms in on the 50-74 age group. The death rate for 50-55 year olds in Porirua is higher than the rate for 70-75 year olds in Kapiti and Wellington. Death rates for people in this age range in Porirua are generally twice those of Kapiti people.

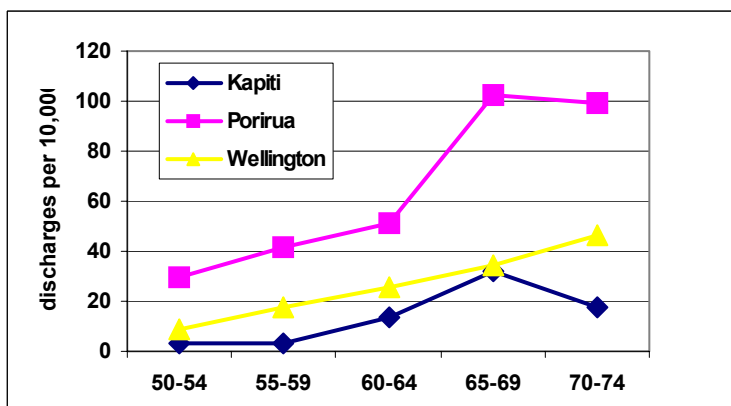
Morbidity

Diabetes morbidity by TLA, 25+ years, 2000/01 - 2002-03



Data source: Ministry of Health

Diabetes morbidity by TLA, 50-74 years, 2000/01 - 2002/03



Data source: Ministry of Health

Discharges from hospital for diabetes are increasing rapidly. In 2000/01 the C&C DHB discharge rate for diabetes was 62 per 100,000 population and more than doubled to 140 per 100,000 population in 2002/03. Discharges vary considerably between ethnic groups and TLAs as shown in the table below.

Standardised discharge ratios for diabetes 2002/03

SDR	Kapiti	Porirua	Wellington
Maori		4.17	1.21
Pacific		4.95	3.16
Other	0.59	0.84	0.81

Data source: Ministry of Health

Diabetes is a particular problem for Maori and Pacific groups and for people living in Porirua.

When compared to the Capital and Coast district as a whole, people in the Other ethnic group have a low rate of discharges for diabetes. The highest rate for this group is in Porirua.

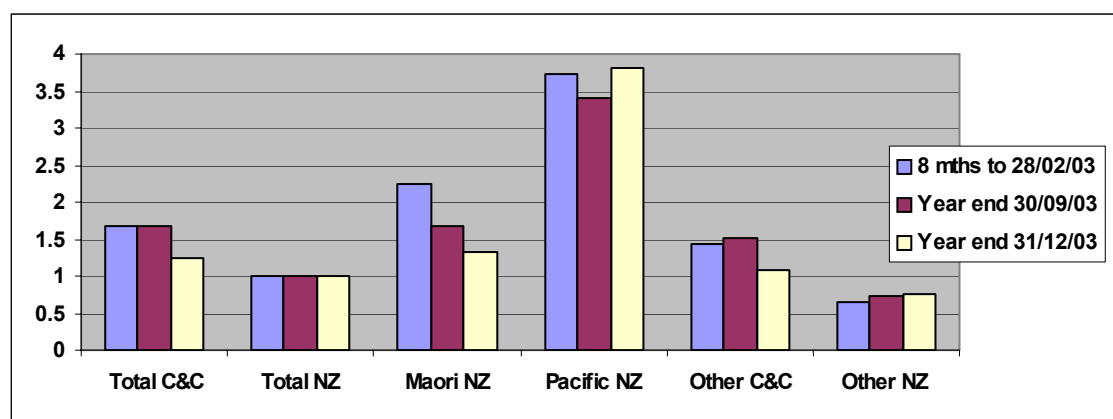
Pacific people have the highest discharge rates in the district. Pacific people living in Porirua have nearly 5 times the district rate of discharges and Pacific people living in Wellington have over 3 times the district rate.

Maori living in Porirua have over 4 times the district rate of discharges. In Wellington, the Maori discharge rate for diabetes is 21% higher than the district rate.

5.4.5 Diabetes indicators

NMDS indicators⁴⁶ for diabetes are shown in the tables below.

SDRs for Vitrectomy for people with diabetes

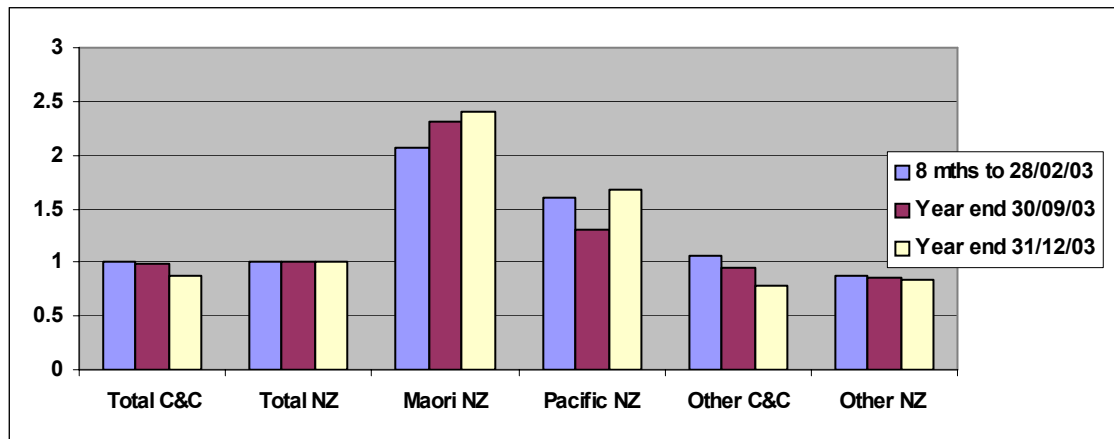


Data source: Ministry of Health

The indicators for diabetes show that there is a higher incidence of discharges for vitrectomy for people with diabetes in C&C DHB than nationally. Vitrectomy is a salvage operation and good primary care and retinal screening should minimise the need for vitrectomy. The rates for Maori and Pacific populations are not shown because of the small numbers of discharges for vitrectomy for these groups.

46 National Minimum Data Set public hospital data maintained by the NZ Health Information Service (NZHIS). Ratios are not shown where the number of discharges are less than 5.

SDRs for lower limb amputation for people with diabetes



Data source: Ministry of Health

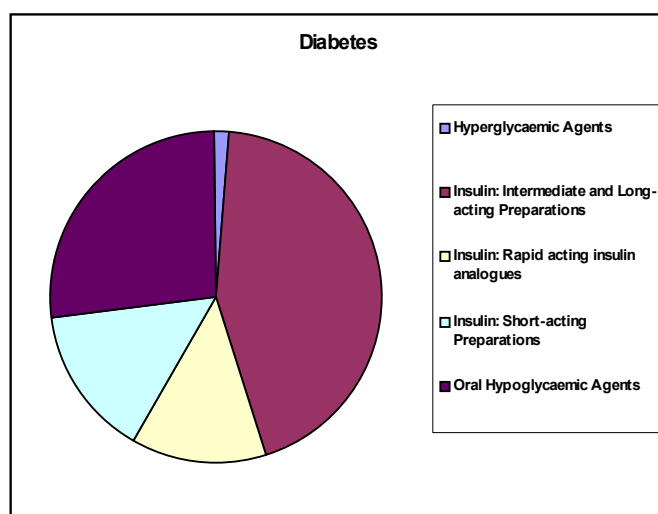
The standardised discharge ratio for lower limb amputations for people with diabetes in C&C DHB is slightly lower than the national ratio. The overall ratio for C&C DHB has decreased slightly, but within this the Other ethnic group shows bigger decreases indicating that the ratios for one or both of the Maori and Pacific ethnic groups have increased.

Nationally the ratios for the Pacific and Maori groups are higher than for Other. Better care for people with diabetes should lower this rate, but the increasing number of people with diabetes may obscure this.

5.4.6 Pharmaceuticals

Pharmaceuticals for diabetes account for 5% of Capital and Coast's total community pharmaceutical expenditure. Subsidies for diabetes are divided into two categories: the drugs used to manage diabetes, and the various test kits, monitors and service delivery devices (diabetes management).

Diabetes pharmaceuticals by total subsidy, C&C DHB, 2001-2004



Data source: NZHIS Pharmhouse

Drugs used to manage diabetes account for 62% of total expenditure for diabetes pharmaceuticals. Within this group, 71.3% is for insulin.

The 'diabetes management' category accounts for 38% of total expenditure for diabetes pharmaceuticals. Within this group, 97% is for blood glucose testing. It should be noted that because of low rates of NHI attached to prescriptions in the data warehouse, further analysis by TLA and ethnicity is not possible.

5.5 Population health

5.5.1 Overview: Smoking

The following information is sourced from Tobacco Facts 2003⁴⁷, and unless otherwise stated is for the whole country as little information is available at DHB level.

5.5.1.1 General

In the years from 1983 to 2002, the highest smoking prevalence has generally been in the 25-34 age group.

People aged 55 and over have shown a decrease in smoking over the years from 1983 to 2002.

In C&C DHB for 2002, smoking prevalence amongst males was 21% compared to 19% amongst females.

Adult smokers in New Zealand smoke an average of 12 cigarettes a day.

5.5.1.2 Ethnicity

In 2002, smoking prevalence amongst Maori was 46%, for Pacific people it was 32% and for European/others was 22%.

Smoking prevalence amongst European/others has decreased 3% in the years 1990-2002 however no such decrease is apparent for Maori and Pacific people.

5.5.1.3 Young people

The prevalence of daily smoking has decreased for both male and female secondary school students from 1999 to 2002.

In the Hutt Valley public health unit region, 15% of males aged 14-15 and 22% of females aged 14-15 are at least weekly smokers.

Young Maori females have particularly high smoking rates and have shown no decrease in the years 1999-2002. 42% of Maori females aged 14-15 are at least weekly smokers.

5.5.2 Overview: Nutrition & obesity

The nutrition and obesity information for adults is based on results of the 1997 New Zealand National Nutrition Survey and numbers are for the whole country. For child obesity, information is based on results of the 2002 Child National Nutrition Survey and is for the whole country.

5.5.2.1 Cholesterol & fats

In the diet of both males and females 35% of energy came from fat which is slightly above the NZ Nutrition Taskforce (1991) guideline of less than 33%.

The percentage of females with cholesterol in the recommended range of 3 – 5 mmol/L was 29% for Other, 44% for Maori and 60% for Pacific.

47 Public Health Intelligence 2003, Tobacco Facts 2003

Males had similar percentages achieving the recommended cholesterol level across all ethnic groups (between 27 and 31%).

5.5.2.2 Obesity

35% of the population were classified as overweight and a further 17% were considered obese.

Maori and Pacific people had a higher percentage of obesity than people of other ethnicities.

For males, the percentage overweight was 59% for Pacific, 41% for Other and 30% for Maori.

Females living in NZDep quartile 1 areas had the lowest level of obesity (13%) compared with those living in quartile 4 areas (25%).

5.5.2.3 Trends

From 1989 to 1997:

Mean body weight has increased by 3.2kg.

Obesity levels have increased from 11% to 17%.

Mean total serum cholesterol has decreased from 5.9mmol/L to 5.7mmol/L.

The proportion of adults with a serum cholesterol greater than 6.5mmol/L has decreased from 30% to 23%.

5.5.3 Overview: Physical activity

The following information is based on combined results of SPARC's 1997, 1998 and 2000 Sport and Physical Activity Surveys. Numbers are for the whole country.

5.5.3.1 Young people

Young people spend an average of 6.6 hours a week playing sport and being active.

On average, boys are active for 7.3 hours a week and girls are active for 5.8 hours a week.

73% of boys are considered active and 64% of girls are considered active.

Young Maori and European are the most active with around 70% of young people considered active.

On average, young Maori are active for 7.7 hours a week and young Europeans are active for 6.5 hours a week.

Young Pacific people and young people of other ethnicities are the least active young people.

On average, young Pacific are active for 5.6 hours a week and young people of other ethnicities are active for 5.7 hours a week.

5.5.3.2 Adults

Adults spend an average of 9.3 hours a week playing sport and being active.

On average, men are active for 10.3 hours a week and women are active for 8.4 hours a week.

Just over two thirds of Maori and European are considered active, 63% of Pacific people are active and 54% of people in other ethnic groups.

On average, Maori adults are active for 10.9 hours a week and European adults are active for 9.3 hours a week.

On average, Pacific adults are active for 8.6 hours a week and adults of other ethnicities are active for 7.2 hours a week.

5.5.4 Background

Approximately 4,700 New Zealand smokers die from smoking-related illnesses each year and an estimated further 388 people die each year from exposure to second-hand smoke. Those smokers who die early from a tobacco-related cause lose, on average, 14 years of life compared with non-smokers.⁴⁸ Tobacco use is responsible for about 25% of all cancer deaths in New Zealand.⁴⁹

Nutrition plays a major role in the three leading causes of death in New Zealand – ischaemic heart disease, cancer and stroke. There is evidence that links colo-rectal cancer with food and dietary habits.⁵⁰ Fruit and vegetables, increased fibre and reduced fat intake may decrease the risk of certain types of cancers, including oral, stomach and colo-rectal cancers.⁵¹ Poor nutrition is also a key factor in the prevalence of obesity, type 2 diabetes, hypertension and dental disease.⁵²

Evidence is emerging to suggest that the prevalence of overweight and obesity is increasing worldwide at an alarming rate. New Zealand is no exception, with more than half the adult population already either overweight or obese. Obesity is associated with heart disease, diabetes, stroke, high blood pressure and certain types of cancers including colo-rectal, breast (post-menopausal) and oesophageal cancer.⁵³ The problem appears to be increasing rapidly in children as well as in adults with the result that the true health consequences may only become fully apparent in the future.⁵⁴

One-third of New Zealand adults are not physically active at levels sufficient to benefit their health.⁵⁵ Physical inactivity is second to smoking as a modifiable risk factor for poor health. It is associated with 8% of all deaths and is estimated to account for over 2000 deaths per year.⁵⁶ People who are physically active are less likely to develop colo-rectal, breast, prostate, lung and uterine cancer.⁵⁷

It is difficult to analyse smoking, nutrition, obesity and physical activity down to DHB level, as data is not readily available by DHB. Therefore, most numbers in this section are based on data for the whole country.

48 <http://www.ndp.govt.nz/tobacco/tobacco01.html>

49 MoH & NZ Cancer Control Trust 2003, The New Zealand Cancer Control Strategy

50 MoH & NZ Cancer Control Trust 2003, The New Zealand Cancer Control Strategy

51 Ministry of Health 2003, New Zealand Food and Nutrition Guidelines for Healthy Adults: A Background Paper

52 MoH 2001, DHB Toolkit: Improve Nutrition

53 MoH & NZ Cancer Control Trust 2003, The New Zealand Cancer Control Strategy

54 MoH 2001, DHB Toolkit: Obesity

55 Ministry of Health 1999, Our Health Our Future

56 MoH 2003, DHB Toolkit: Physical Activity

57 MoH & NZ Cancer Control Trust 2003, The New Zealand Cancer Control Strategy

5.5.5 Smoking

In this section, unless otherwise specified, 'smokers' includes those who smoke, on average, less than 1 cigarette a day. Daily smokers are those who smoke one or more cigarettes a day.

5.5.5.1 Age and gender

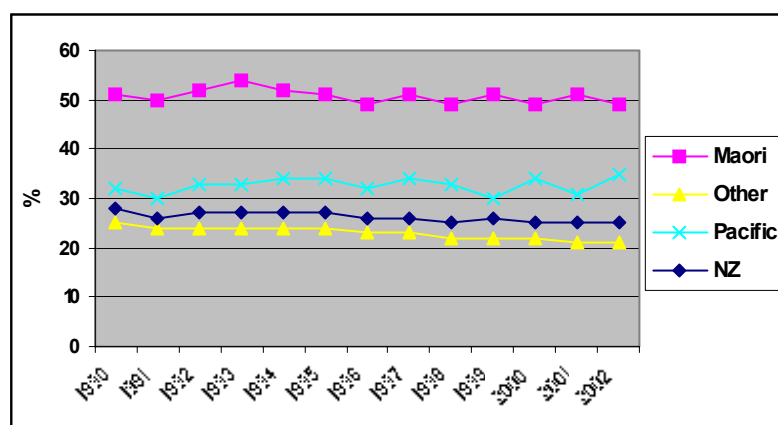
In the years from 1983 to 2002, the highest smoking prevalence has generally been in the 25-34 age group. People aged 55 and over have shown a decrease in smoking over these years.

For people aged 15-24 years smoking is more prevalent amongst females than males. For males and females aged 25-34 years smoking prevalence is similar. For ages 35 and over smoking is more prevalent amongst males, although this may change in the future as young female smokers grow older. Adult smokers smoke an average of 12 cigarettes a day.

In C&C DHB in 2002, smoking prevalence amongst males was 21% compared to 19% amongst females.

5.5.5.2 Ethnicity

Prevalence of cigarette smoking by ethnicity, 15+ years, 1990-2002



Data source: ACNielsen (NZ) Ltd

Note: The classification of ethnicity information changed from 1997 onwards – ethnic specific data before and after 1997 may not be comparable.

Smoking prevalence amongst the Other ethnic group has decreased at an average rate of 1.3% a year. It is difficult to determine if prevalence amongst Maori and Pacific people is increasing or decreasing as the percentage fluctuates from year to year. Smoking prevalence for Maori and Pacific people is above the national average for all ethnicities. In 2002, smoking prevalence amongst Maori was 49%, amongst Pacific people was 35% and amongst other ethnicities was 21%.

5.5.6 Smoking in youth

The information in this section is from the ASH National Fourth Form Survey (2002) as reported in Tobacco Facts 2003, and unless otherwise stated, numbers are for the whole country.

5.5.6.1 Gender

The prevalence of daily smoking has decreased for both male and female secondary school students from 1999 to 2002.

In the Hutt Valley Public Health Unit region, 15% of males aged 14-15 and 22% of females aged 14-15 are at least weekly smokers.

5.5.6.2 Ethnicity

Smoking prevalence by gender and ethnicity, 14-15 years, 2002

	Maori	Pacific	Asian	European/Other	Total
Daily smoking					
Male	17	11	8	9	10
Female	34	18	4	11	15
At least weekly smoking					
Male	21	14	10	12	14
Female	42	23	6	17	21

Data source: Action on Smoking and Health (ASH)

Smoking prevalence has decreased for secondary school students in all ethnic groups except Maori females and Asian males.

Young Maori females have particularly high smoking rates. 42% of Maori females aged 14-15 are at least weekly smokers, and 34% of young Maori females are daily smokers.

5.5.7 Nutrition and obesity

5.5.7.1 Adults

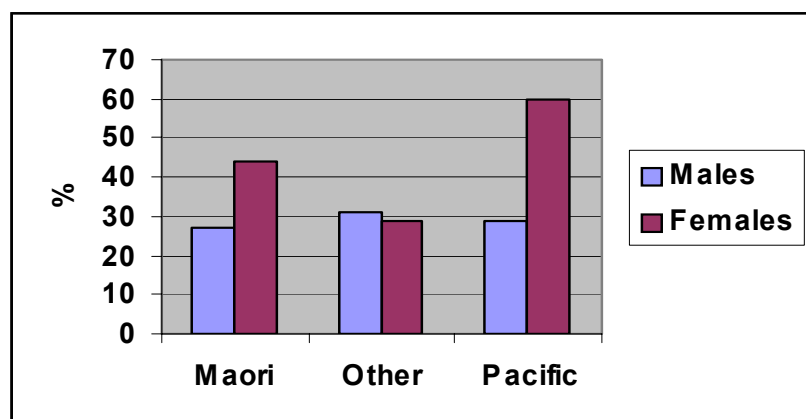
The following is based on results of the 1997 New Zealand National Nutrition Survey⁵⁸. The survey was based on a nationally representative sample of 4,636 New Zealanders aged 15 years and over.

In the diet of both males and females 35% of energy came from fat. This is slightly above the NZ Nutrition Taskforce (1991) guideline of less than 33%. Saturated fat contributed 15% of energy in the diet of both males and females. Monounsaturated fats contributed 12% of energy in males and 11% of energy in females. Polyunsaturated fat contributed 5% of energy in both sexes.

Lipid guidelines developed by the National Heart Foundation (1996) recommend a total cholesterol of 3mmol/L – 5mmol/L. 31% of New Zealanders achieved this guideline.

⁵⁸ Ministry of Health 1999

Percentage meeting lipid guideline, 15+ years



Data source: Ministry of Health

Among females, those in the Other ethnic group were the least likely to achieve the recommended cholesterol level (29%). In comparison 44% of Maori women met the guideline and 60% of Pacific women met the guideline. Males had similar percentages across all three ethnic groups (27 – 31%).

The proportion of the population who are overweight⁵⁹ or obese⁶⁰ can be estimated from Body Mass Index (BMI).

Percentage overweight or obese by ethnicity and gender, 15+ years

	Overweight		Obese	
	Males	Females	Males	Females
Maori	30	33	27	28
Other	41	30	13	17
Pacific	59	29	26	47
All ethnicities	40	30	15	19

Data source: Ministry of Health

35% of the population were classified as overweight and a further 17% were considered obese. Males are more likely to be overweight than females, however this pattern is reversed for obesity, with females more likely to be obese than males.

Maori and Pacific people had a higher percentage of obesity than people of other ethnicities. Pacific males had the highest proportion of people overweight (59%). 41% of males in the Other ethnic group were overweight and 30% of Maori males were overweight. The proportion of overweight females did not vary much between ethnic groups, although there is a slightly higher proportion of overweight Maori females than that for all ethnicities.

In females, there is a strong relationship between deprivation and obesity. Females living in NZDep quartile 1 areas had the lowest level of obesity (13%) compared with those living in quartile 4 areas (25%). This relationship is not significant in males.

⁵⁹ Maori and Pacific people with 26 BMI<32 and Other people with 25 BMI<30

⁶⁰ Maori and Pacific people with BMI 32 and Other people with BMI 30

5.5.7.2 Trends

In the years from 1989 to 1997:

Percentage contribution to energy from fat has decreased from 37.5% to 35%.

Mean body weight has increased by 3.2kg (however this may be offset by a corresponding increase in height).

Obesity levels have increased from 11% to 17%.

Mean total serum cholesterol has decreased from 5.9mmol/L to 5.7mmol/L.

The proportion of adults with a serum cholesterol greater than 6.5mmol/L has decreased from 30% to 23%.

5.5.7.3 Child Obesity

The following information is taken from the 2002 National Children's Nutrition Survey.⁶¹ The survey was based on a nationally representative sample of 3275 children aged 5-14. The sample included sufficient Maori and Pacific children allowing for ethnic specific analysis.

Percentage overweight or obese by ethnicity and gender, 5-14 years

	Overweight ⁶²		Obese ⁶³	
	Boys	Girls	Boys	Girls
Maori	20	31	16	17
Other	18	19	5	6
Pacific	34	33	26	31
All ethnicities	20	23	9	11

Data source: Ministry of Health

In 2002, 21% of New Zealand children (aged 5-14) were considered overweight, and a further 10% were considered obese. Girls are more likely to be overweight or obese than boys. Pacific and Maori children had a higher percentage of overweight and obesity than children of other ethnicities. Obesity is particularly prevalent amongst Pacific children.

5.5.8 Physical activity

The following information on physical activity is based on combined results of Sport and Recreation New Zealand's (formerly the Hillary Commission) 1997, 1998 and 2000 Sport and Physical Activity Surveys. These national surveys have now interviewed a total of 16,500 people. In the following tables, 'active' is defined as having taken part in at least 2.5 hours of sport/leisure-time physical activity in the 7 days before the interview.

⁶¹ MoH, 2003

⁶² Using international cutoffs as defined by Cole et.al. (2000)

⁶³ Using international cutoffs as defined by Cole et.al. (2000)

Levels of physical activity among young people in New Zealand

	Girls	Boys	Maori	Pacific	European	Other	All young people
% active	64	73	71	52	70	59	68
Hours active per week	5.8	7.3	7.7	5.6	6.5	5.7	6.6

Data source: Sport and Recreation New Zealand

Young people spend an average of just over 6½ hours a week playing sport and being active. On average, boys are active for 1½ hours more a week than girls and 9% more boys than girls are considered active.

Young Maori and European are the most active with around 70% of young people considered active. The least active are young Pacific people and young people of other ethnicities.

Levels of physical activity among adults in New Zealand

	Women	Men	Maori	Pacific	European	Other	All adults
% active	66	69	67	63	69	54	68
Hours active per week	8.4	10.3	10.9	8.6	9.3	7.2	9.3

Data source: Sport and Recreation New Zealand

Adults spend, on average, just over 9 hours a week playing sport and being active. On average, men are active for 2 hours more a week than women.

Just over two thirds of Maori and European are considered active. Activity levels are slightly lower for Pacific people (63%). Adults of other ethnicities are the least active with only 54% physically active.

5.5.9 Communicable diseases

Rates per 100,000 population of disease notifications, 2001-2003

Disease	Maori	Pacific	Other	District	NZ
Campylobacteriosis	172	121	550	476	311
Cryptosporidiosis	17	13	54	47	25
Gastroenteritis	7	17	32	28	25
Giardiasis	26	8	63	55	39
Meningococcal disease	13	35	6	9	15
Pertussis	20	10	26	24	25
Salmonellosis	21	24	59	52	47
Tuberculosis disease	10	22	13	14	10
Yersiniosis	4	6	14	12	11

Data source: Environmental Science and Research Ltd (EpiSurv)

The disease notification rate in Capital and Coast is higher than the national rate for many of the diseases shown above. However, the district rate for meningococcal disease is lower

than the national rate. People of Other ethnicity have high rates of campylobacteriosis, cryptosporidiosis, gastroenteritis and giardiasis. Maori and Pacific have high rates of meningococcal compared to other ethnicities. Pacific people also have high rates of tuberculosis compared to all other ethnic groups. Note that these rates are not age standardised, and patterns seen may be due to the differing age structures between population sub-groups.

5.6 Suicide

5.6.1 Overview

5.6.1.1 General

Suicide accounted for 1.8% of all deaths in C&C DHB in 2000 with a rate of 11 deaths per 100,000 population.

Deaths by suicide have increased 15% in the years from 1988 to 2000.

Of all suicides between 1988 and 2000 in C&C DHB, 74% were males and 26% were females.

Discharge rates for intentional self-harm are lower in C&C DHB than the national average.

Females have a higher discharge rate for intentional self-harm than males.

Nationally, the discharge rate for all ethnicities is 135.4 per 100,000 population and for Maori is 141.1 per 100,000 population.

5.6.1.2 Youth suicide

Suicide accounted for 19% of all youth (15-24 years) deaths in C&C DHB in 2000.

The suicide rate for 15 to 24 year olds was 16.5 deaths per 100,000 population between 1997 and 2000.

The youth suicide rate in the district is less than the national average for all ages with the exception of males aged 10-14 years.

In 2003, 74% of 15-24 year olds hospitalised for intentional self harm were female.

In 2000/01 significantly more females than males in the 15-19 year old age group were admitted for intentional self harm. No gender difference was observed in the 10-14 year and 20-24 year age group.

5.6.2 Background

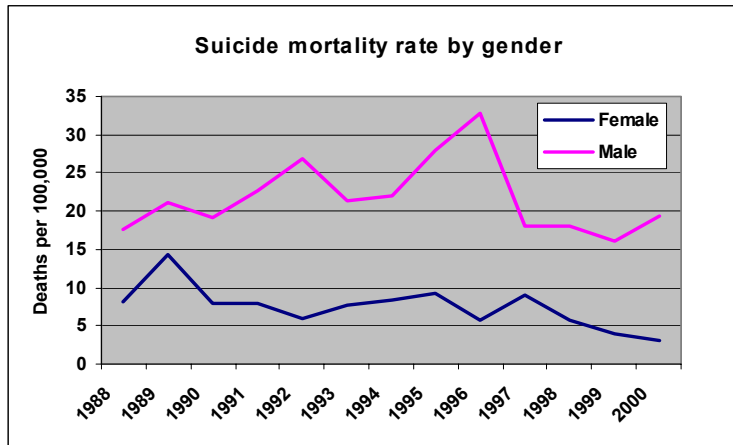
Reducing the rate of suicide and suicide attempts is one of the New Zealand Health Strategy's thirteen priorities. The suicide rate for the New Zealand population has increased steadily over the last 20 years. New Zealand has one of the highest rates of youth (15 to 24 years) suicide in a comparison of OECD countries.⁶⁴

5.6.3 Mortality

Suicide accounted for 1.8% of all deaths in the Capital and Coast district in 2000, with a rate of 11 deaths per 100,000 population. Of all suicides between 1988 and 2000 in the C&C DHB, 74% were males and 26% were females. While suicide mortality rates are very low, deaths by suicide have increased by 15% in the years from 1988 to 2000. This converts to average increase of 1.2% per year. The trends for males and females are different, as shown in the graph below.

⁶⁴ MoH 2001, DHB Toolkit: Suicide Prevention

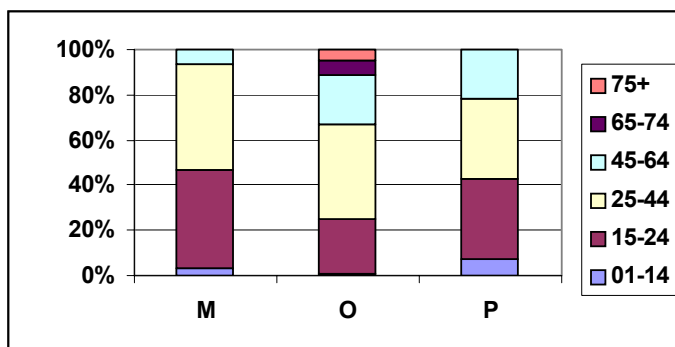
Trends in suicide mortality rates by gender, C&C DHB, 1988-2000



Data source: Ministry of Health

Male suicides increased by 86% from 1988 to 1996 and then began to decline. Female suicides continue to decrease.

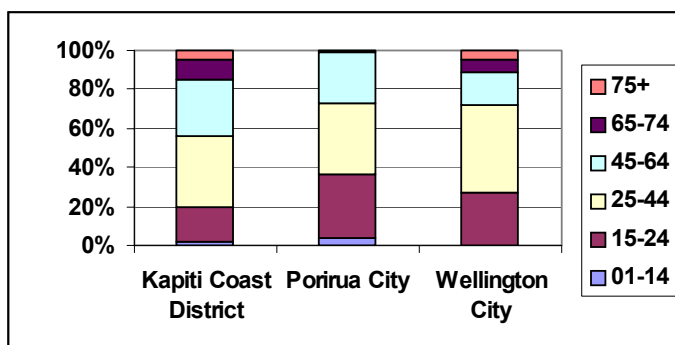
Suicides by age and ethnicity 2000



Data source: Ministry of Health

Over 90% of Maori suicides and 80% of Pacific suicides are people aged under 45. The greatest number of suicides is in the 25 to 44 age group, however Pacific people have an equal proportion of suicides in the 15-24 age group. For Maori and Pacific people, over 40% of suicides are people under the age of 25. In comparison, just over 20% of suicides in the Other ethnic group are people aged under 25.

Suicides by age and TLA 2000



Data source: Ministry of Health

Again, the greatest proportion of deaths from suicide is in the 25-44 age group. The 45-64 age group also accounts for a significant percentage of suicides in Kapiti and Porirua.

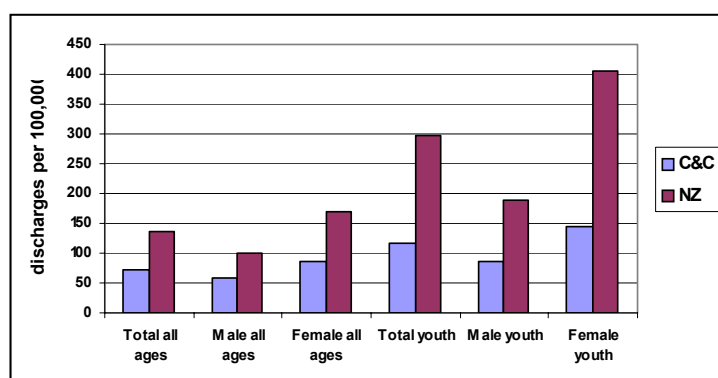
In Porirua, nearly 40% of suicides are people aged under 25, and three quarters of suicides are people aged under 45. Wellington has a similar percentage of suicides for people aged under 45, but only 25% of deaths are for people aged under 25. In Kapiti, only 20% of suicides are people aged under 25.

There are significant numbers of suicides by older people in both Kapiti and Wellington. In Kapiti people aged 64 years and older account for 15% of suicides and in Wellington people in this age group account for 11% of suicides.

5.6.4 Morbidity

Although males have a higher mortality rate than females, females have a higher rate of hospital discharges for suicide attempts. Nationally, Maori have a slightly higher discharge rate for intentional self-harm than the total population. The national rate for all ethnicities is 135.4 per 100,000 population while the national rate for Maori is 141.4 per 100,000 population.

Discharge rate for intentional self-harm 2000/01



C&C DHB hospital discharge rates for all age groups for intentional self-harm are lower than national rates. The graph to the left shows that youth discharge rates are higher than the rates for all age groups, and females have higher discharge rates than males.

Data source: NZHIS

5.6.5 Youth suicide⁶⁵

5.6.5.1 Mortality

In 2000 suicide accounted for 19% of all youth (15-24 years) deaths in the Capital and Coast district. Between 1997 and 2000, the youth suicide rate was 16.5 deaths per 100,000 population. There is a significant difference between male and female youth suicide rates. The table below summarises deaths by suicide in C&C DHB between 1997-2001.

⁶⁵ Most data in this section was sourced from C&C DHB, Youth Suicide and Self Harm, June 2004

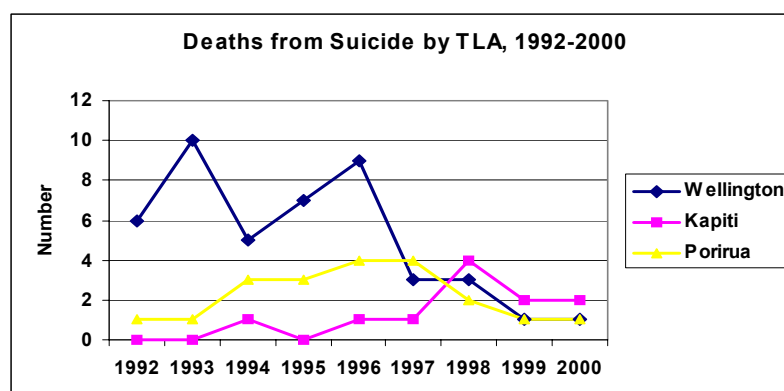
Suicide deaths by age and sex, C&C DHB and NZ, 1997-2001

	10-14 years		15-19 years		20-24 years	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
C&C DHB Male	2	4.7	8	19.5	14	29.9
NZ Male	20	2.7	182	27.0	289	47.8
C&C DHB Female	0	0	4	9.4	4	7.7
NZ Female	13	1.8	88	13.5	68	8.4
C&C DHB Total	2	2.4	12	14.4	18	18.2
NZ Total	33	2.3	270	20.4	335	27.9

Data source: NZHIS

The rate of suicide in the district is less than the national rate for all ages with the exception of males aged 10-14 years. In this age group the C&C DHB rate is 4.7 per 100,000 population compared to the national rate of 2.7 per 100,000 population. The numbers of youth who die from suicide increases with age.

Suicide deaths for youth aged 15-24 years by TLA, 1992-2000



Data source: NZHIS

There is some variation between years in suicide deaths by TLA. Numbers appear to be decreasing in Wellington, however it is difficult to predict trends as the numbers are so small.

5.6.5.2 Hospitalisations for intentional self harm

The table below shows the number of young people admitted to hospital for intentional self harm during the 2000/01 financial year. During this year, significantly more females than males in the 15-19 year old age group were admitted with a diagnosis of intentional self harm. No gender difference was observed in the 10-14 year and 20-24 year age group.

Hospitalisation for intentional self harm by gender, C&C DHB 2000/2001

	10-14 yrs	15-19 yrs	20-24 yrs
Male	3	3	12
Female	4	16	11
Total	7	19	23

Data source: NZHIS

More recent hospital data has been obtained from 2003 for patients hospitalised for intentional self harm in the 15-24 year age group. 74% of people in this age group were female.

5.7 Respiratory health

5.7.1 Overview

5.7.1.1 All respiratory conditions

In 2000 respiratory conditions accounted for 7% of all deaths in C&C DHB.

For the 75+ age group respiratory conditions were responsible for 324 deaths per 100,000 population.

Deaths from respiratory conditions have declined at an average rate of 4% a year from 1988 to 2000.

Respiratory conditions are one of the top causes of morbidity for people aged under 20.

5.7.1.2 Respiratory infections

For Pacific people living in Wellington the discharge rate for respiratory infections is 2½ times the district rate and for Pacific people living in Porirua it is twice the district rate.

For Maori living in Wellington the discharge rate for respiratory infections is 60% higher than the district rate and for Maori living in Porirua the rate is 83% higher than the district rate.

5.7.1.3 Asthma

For Maori living in Wellington the discharge rate for asthma is more than twice the district rate and 66% higher than the district rate for Maori living in Porirua.

For Pacific living in Wellington the discharge rate for asthma is more than twice the district rate and 45% higher than the district rate for Pacific living in Porirua.

The asthma discharge rate for Other living in Kapiti is 24% higher than the district rate.

5.7.1.4 CORD

Maori and Pacific people living in Wellington have discharge rates for CORD that are 2½ times the district rate.

Maori and Pacific people living in Porirua have discharge rates for CORD that are three times the district rate.

People in the Other ethnic group living in Porirua have a discharge rate for CORD that is 67% higher than the district rate.

5.7.2 Background

Respiratory diseases include a number of respiratory conditions and problems. These include: asthma and other long term conditions such as chronic obstructive pulmonary disease (COPD), pulmonary infections (particularly pneumonia and tuberculosis), vascular diseases, malignant diseases in the chest, chest trauma, sleep related breathing disorders (sleep apnoea), and respiratory failure due to neuromuscular diseases, amongst others.

Nationally respiratory conditions are the fifth most significant health issue as measured by the burden of disease. For Maori they are the third most significant health issue.

5.7.3 Mortality

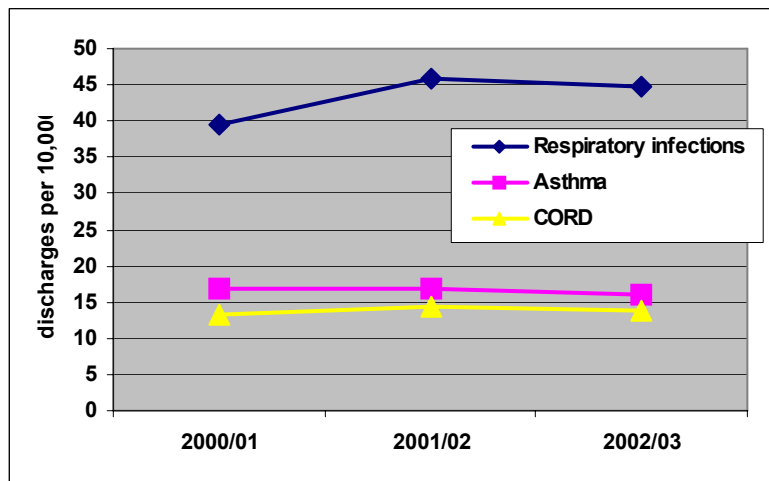
Mortality rates from respiratory conditions are generally very low. In 2000 respiratory conditions accounted for 7% of all deaths in the Capital and Coast district with a mortality rate of 45 deaths per 100,000 population. Such conditions are more significant in the population aged 75 and over, where they accounted for 324 deaths per 100,000 population.

In the year 2000 Chronic obstructive respiratory disease (CORD) was responsible for 15 deaths per 100,000 population and 101 deaths per 100,000 population in the over 75 age group.

Between the years 1988 and 2000, deaths from respiratory conditions decreased at an average rate of 4% per year.

5.7.4 Morbidity

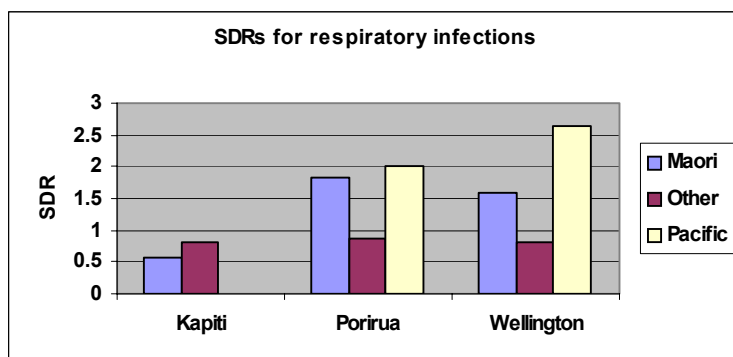
Trend in respiratory discharges by condition 2000/01-2002/03



Data source: Ministry of Health

Data in the above graph is limited to three years. No condition is showing a significant increasing or decreasing trend.

Standardised discharge ratios for respiratory infections 2002/03

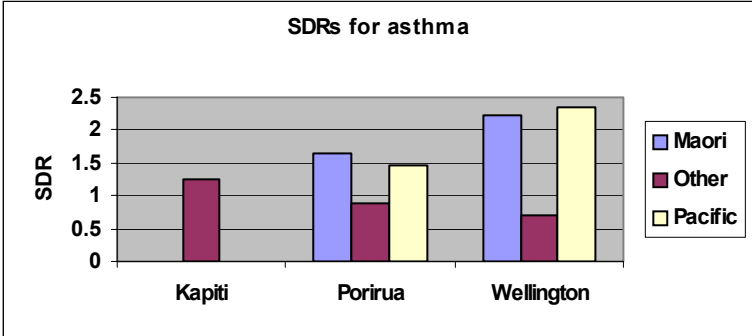


Data source: Ministry of Health

When compared to the district as a whole, the Other ethnic group have a low rate of discharges for respiratory infections. The table above shows that respiratory infections are a particular problem for Maori and Pacific people.

Pacific people living in Wellington have more than 2½ times the discharge rate of the district population. Pacific people in Porirua have twice the discharge rate of the district as a whole. Maori living in Wellington have a rate of discharges that is 60% higher than the district rate. In Porirua, the Maori discharge rate is 83% higher than the district rate.

Standardised discharge ratios for asthma 2002/03



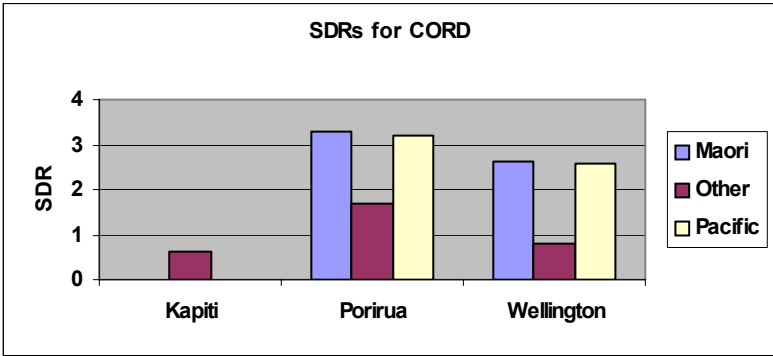
Data source: Ministry of Health

Overall the Other ethnic group has a low rate of discharges for asthma when compared to the district as a whole. However, in Kapiti, the Other ethnic group has a 24% higher rate than the district population.

Maori and Pacific people have higher rates of discharges for asthma than the district population. Maori living in Porirua have a 66% higher discharge rate than the district rate, and for Pacific people in Porirua the discharge rate is 45% higher than the district rate.

For both Maori and Pacific people living in Wellington the discharge rate is more than twice that of the district as a whole.

Standardised discharge ratios for CORD 2002/03



Data source: Ministry of Health

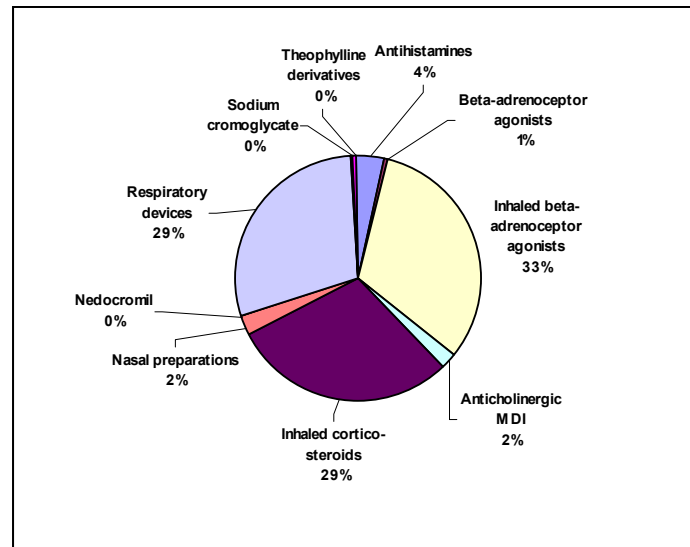
Apart from those living in Porirua, people in the Other ethnic group have a discharge rate that is lower than the district rate. People in the Other ethnic group living in Porirua have a discharge rate for CORD that is 67% higher than the district rate.

Maori and Pacific people living in Wellington have discharge rates that are more than 2½ times district rate. For Maori and Pacific people living in Porirua, the rates are three times the district rate.

5.7.5 Pharmaceuticals

Pharmaceuticals for the respiratory system and allergies account for 15% of Capital and Coast's total community pharmaceutical expenditure. The respiratory group is dominated by the main asthma therapies and preventatives (inhaled cortico-steroids, inhaled beta-agonists and respiratory devices).

Respiratory by total subsidy, C&C DHB 2001-2004



Data source: NZHIS Pharmhouse

It should be noted that figures for the respiratory devices group are inflated, as a contract for respiratory devices is based in Wellington and supplies peak flow meters and spacer devices to the whole country. As a result, the percentage of expenditure for C&C DHB residents will be lower for respiratory devices and higher for inhaled beta-agonists and inhaled cortico-steroids.

5.8 Disability

5.8.1 Overview

5.8.1.1 *National*

1 in 5 New Zealanders has a disability. The rate is the same for Maori and 1 in 7 Pacific people have a disability.

The rates for Maori in the 45-64, 65+, and child age groups are higher than the national averages for those groups.

Only 4% of people with disabilities live in residential facilities with the remainder living in households. Of those living in residential facilities, 70% live in rest homes.

The number of disabled people living in intellectual disability units and mental health facilities has decreased significantly since 1996/97.

5.8.1.2 *Types of disabilities*

60% of people with disabilities have more than one disability. People living in residential facilities are more likely to have multiple disabilities.

Physical disabilities are the most common type of disability. 66% of adults with a disability report some kind of physical disability.

A third of disabled adults living in households use special equipment and 12% reported an unmet need for some type of special equipment.

10.2% of males and 9.3% of females have a disability requiring assistance. Maori are more likely than non-Maori to have a disability requiring assistance.

5.8.1.3 *Capital and Coast DHB*

An estimated 20% of people living in C&C DHB have a disability.

1 in 5 Maori have a disability, 1 in 7 Pacific people have a disability and 1 in 5 people of other ethnicities has a disability.

In Wellington and Kapiti, approximately 18% of disabled people are in the Other ethnic group.

In Porirua, there are higher numbers of Maori and Pacific people with disabilities.

Of those people with disabilities, 23% of Maori, 18% of Pacific people and 14% of Other are estimated to have an unmet need.

The following information is taken from the 2001 New Zealand Disability Survey. This survey provides an overview of disability in New Zealand covering both people living in households and residential care facilities.

Information on psychiatric disability has not been included in this section as there is limited data available in this area.

5.8.2 Who has a disability?

One in five New Zealanders has a disability. This has not changed since the 1996/97 survey. The disability rate for males and females is the same.

One in five Maori have a disability. The disability rate for Pacific peoples is 1 in 7.

Disability increases with age. 11% of children aged 0 to 14 years have a disability, compared with 13% of adults aged 15 to 44 years, and 25% of adults aged between 45 and 64 years. 54% of people aged 65 years and over reported having a disability.

The rates for Maori in some age groups are higher than the national rates. 33% of Maori aged 45 to 64 years reported a disability compared with 25% of the total population in the same age group. 61% of Maori aged 65 and above reported a disability, compared with 54% of the total population. The rate for Maori children is 15%, compared to the national rate for children of 11%.

52% of urban dwellers aged 65 and over living in households have a disability, compared with 45% of their rural counterparts. The rates do not vary between people living in urban and rural areas for other age groups.

5.8.3 Where do people with disabilities live?

4% of people with disabilities live in residential facilities, 96% live in households.

70% of people with disabilities in residential facilities live in rest homes.

Approximately 200 disabled people in residential facilities were living in intellectual disability units in 2001, compared with an estimated 1,700 in 1996–1997.

The number of people with disabilities living in mental health facilities has halved, from 1,000 in 1996–1997 to around 500 in 2001.

5.8.4 What types of disabilities do they have?

60% of people with disabilities have more than one disability, and 40% have a single disability.

People living in residential facilities are more likely to have multiple disabilities. 96% of disabled people living in residential facilities reported more than one disability compared with 59% of disabled people living in households.

Physical disabilities remain the most common type of disability. 66% of adults with disabilities reported some kind of physical disability. Sensory disabilities were the next most common at 40%.

The leading cause of disability is a disease or illness at 40%, followed by an accident or injury at 30%.

The number of people with mild disabilities have decreased from 60% in 1996/97 to 42% in 2001, the number with moderate disabilities have increased from 28% to 43%, and the number with severe disabilities have increased slightly from 12% to 15%.

33% of disabled adults living in households reported that they use special equipment. 12% reported an unmet need for some type of special equipment.

5.8.5 Disability requiring assistance

In 2001 the prevalence rate of disability requiring assistance was 10.2% for males and 9.3% for females (age standardised).

7.8% of males and 7% of females need only intermittent help. A further 2.4% of males and 2.3% of females have a more severe level of disability requiring daily help.

Maori are more likely than non-Maori to have a disability requiring assistance. The prevalence rate was 13.4% for Maori males and 14.5% for Maori females (compared to 9.9% and 9.0% for non-Maori).

5.8.6 Estimates of Capital and Coast District disabled population

No meaningful data relating to the Capital & Coast district can be gleaned from the 2001 Disability Survey as the regional focus was based on the four Regional Health Authority areas that were in place in 1996-97. Taking the district population statistics and applying National disability ratios gives:

Estimate of the Capital & Coast District Disabled Population

ETHNIC GROUP	Kapiti		Porirua		Wellington		District
	Count	% of TLA	Count	% of TLA	Count	% of TLA	Count
Maori with disabilities	595	1.7%	1875	4.0%	2378	1.5%	4848
Pacific people with disabilities	63	0.2%	1549	3.3%	1056	0.6%	2669
Other ethnicities with disabilities	6236	18.1%	6040	12.8%	29323	17.9%	41599
All Ethnicities with disabilities	6894	20.0%	9464	20.0%	32757	20.0%	49116

Data source: based on data in Disability Counts 2001, Statistics New Zealand

It is estimated that there are 49,116 people with a disability in C&C DHB. This includes all kinds of disability from mild disabilities to severe physical disability.

Estimate of unmet need for at least one type of health service for C&C DHB disabled population (Adapted from Disability Counts 2001)

Ethnic group	Est. disabled Pop	Est. people with unmet need
Maori	4848	1115 (23%)
Pacific	2669	467 (17.5%)
Other	41599	5782 (13.9%)
Total	49116	7364 (15%)

Data source: based on data in Disability Counts 2001, Statistics New Zealand

This table is based on national figures and therefore may not apply to the Capital and Coast district.

5.8.7 Barriers to participation⁶⁶

The 2001 New Zealand Disability Survey found that 39% of disabled adults living in households had no educational qualification compared to 24% of adults with no disability.

57% of working age adults (15-64) with a disability were employed compared with 71% of adults with no disability.

56% of adults with disabilities had a personal income of less than \$15,000 compared to 40% of adults with no disability.

5.8.8 Capital Support

Capital support packages by level of care

Level of care package	Number of people	Percentage
Low (\$0-\$30)	1140	22%
Medium (\$30-\$180)	1504	28%
High (\$180-\$360)	285	5%
Very high (\$360-\$650)	1043	20%
Extremely high (\$650+)	892	17%
Not stated	421	8%
Total	5285	100%

Capital Support is the Needs Assessment Service Coordination agency for C&C DHB. There are 5285 people registered with Capital Support, compared to an estimated disabled population of 49,116 people.

⁶⁶ Note that in part, these figure reflect the older age distribution of people with disabilities, and that older people tend to be more poorly qualified, and to be on lower personal incomes (Ministry of Social Development)

5.9 Other priority areas

Mental illness

The information in this section is from the Mental Health and General Practice Investigation (MaGPIe).⁶⁷ This study examined the prevalence and types of common mental disorders among patients attending New Zealand GP practices. 70 GPs in Wellington, Kapiti and Manawatu were randomly selected. 3,414 patients answered a general health questionnaire, and a further 908 were selected for more detailed psychological assessment. The results presented below are based on the detailed assessment.

Over a third of people visiting their GP had a diagnosable mental disorder in the year prior to the consultation. The most prevalent disorders were anxiety disorders (21%), depressive disorders (18%) and substance use disorders (11%).

Prevalence of mental disorders by gender

Disorder	Male	Female
Anxiety disorders	12%	26%
Depressive disorders	21%	22%
Substance use/dependence	17%	8%

Substance abuse disorders were twice as common among males as females. Anxiety disorders were twice as common among females as males, and depression also more common in females. Prevalence of mental disorders in females is highest in the 18-24 age group (58%) followed by the 25-44 age group (49%). Prevalence is highest for males in the 18-44 age group (50%). People aged over 65 had the lowest rates of mental disorders of any age group.

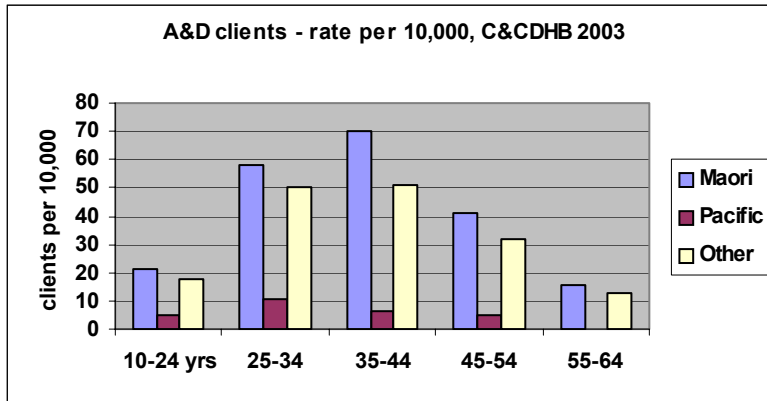
Co-morbidity was common. For both males and females, over half of those aged under 44 had one or more mental disorders. More people with anxiety disorders also suffered depression than had an anxiety disorder alone. More people with depression also had an anxiety disorder than depression alone. Substance use with either depression or anxiety disorder was as common as substance use alone.

5.9.2 Alcohol and drugs

The information below is for Capital and Coast residents seen by an alcohol and drug team during the 2003 calendar year. It should be noted that there are NGO providers and other providers that C&C DHB does not contract with who also provide A&D services to our population. These are not included in this analysis due to data quality and data availability issues.

⁶⁷ MaGPIe Research Group (2003)

Alcohol & Drug services - clients seen per 10,000 population, C&C DHB 2003

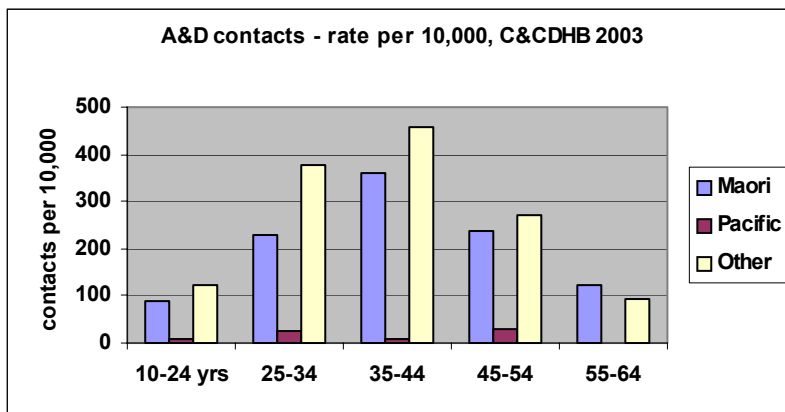


Data source: MHINC

Maori have the highest rate of clients seen per 10,000 population for all age groups. A low number of Pacific people were seen by A&D teams. Over all ethnicities the rate is highest for the 35-44 age group, followed by the 25-34 age group.

Although Maori have the highest rate of clients seen, it is the Other group that have the highest rate of contacts per client. Other have an average of 9 contacts per client, whereas Maori have an average of 5 contacts per client. Pacific have an average of 2 contacts per client.

Alcohol & Drug services - contacts per 10,000 population, C&C DHB 2003



Data source: MHINC

5.9.3 Violence

The information in this section is based on the results of the 2001 National Survey of Crime Victims⁶⁸ as reported in The Social Report 2004⁶⁹ and is for the whole country.

9% of the adult (15+ years) population reported that they had been a victim of violent offending in 2000. This is the same level as in 1995. However, it is only a small number of individuals that are the victims of the majority of violent offences. Less than 2% of adults were the victims of violence five or more times, yet they accounted for 55% of violent offences.

⁶⁸ Morris et. Al. (2003)

⁶⁹ Ministry of Social Development (2004)

Youth aged 15-24 years were more than twice as likely to be victims of violent crimes than people aged 25 to 29, which is the next closest group. Men and women are equally as likely to be victims of violent crimes, however, more men than women experience violence by someone not well known to them. Maori are more likely to be the victims of violence (20%) compared to Pacific people (11%) and Europeans (8%).

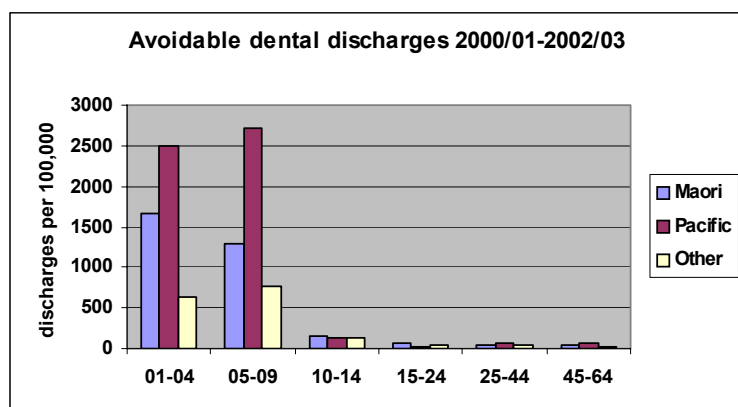
According to survey information, 26% of women and 18% of men had been abused or threatened with violence by a partner at some time during adulthood. The proportion of women who had been abused or threatened with violence by a partner was the highest for Maori at 49%, followed by European women (24%) and Pacific women (23%).

Information on violence against children is included in the Child health section of this chapter (5.9.5.1), and the Child health section of Chapter 6 on Maori (6.9.4.1).

There are health implications for people affected by violence. Violence prevention programmes in the region have been found to have a positive effect on the health and wellbeing of the communities in which they are delivered.

5.9.4 Oral health

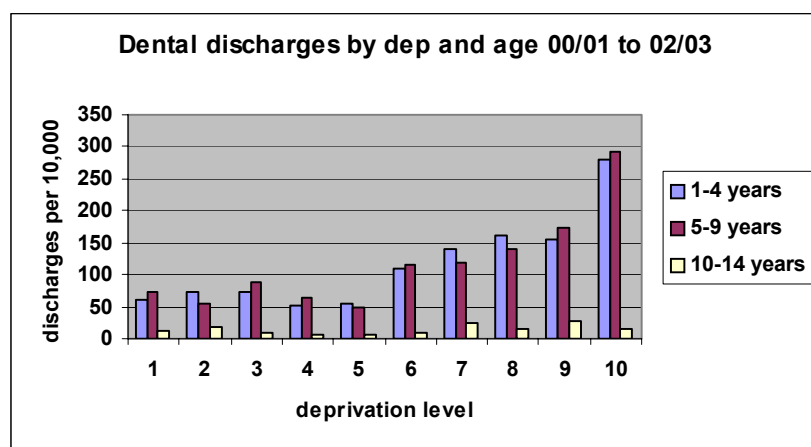
Avoidable dental discharges by age and ethnicity, 2000/01-2002/03



The majority of avoidable discharges for dental are for children aged 1 to 9 years. Pacific children have the highest discharge rate of all ethnicities. Maori children have a higher discharge rate than children of 'Other' ethnicity.

Data source: Ministry of Health

Avoidable dental discharges by deprivation and age, 2000/01-2002/03



The graph above shows that dental discharges for children aged 1 to 9 increase with increasing deprivation. This trend is not apparent for children aged 10 to 14.

Data source: Ministry of Health

Adolescent oral health is reported on in section 4.2.10.

5.10 Child health

Overview

5.10.1.1 Respiratory

Pneumonia is a significant problem for Pacific children who have 2½ times the district discharge rate.

For Maori children living in Wellington, the pneumonia discharge rate is 35% higher than the district rate. For Maori children living in Porirua the rate is 27% higher.

Pacific children living in Wellington have more than 2½ times the district rate of asthma discharges. For Pacific children living in Porirua the rate is 43% higher than the district rate.

Maori children living in Wellington have a 56% higher asthma discharge rate than the district rate. For Maori children living in Porirua the rate is 11% higher than the district rate.

5.10.1.2 Hearing and oral health

The percentage of children in the Wellington region (C&C DHB & HVDHB) failing hearing screening is less than the national average.

Maori and Pacific children have a higher failure rate than children of other ethnicities.

Maori and Pacific groups have a significantly lower percentage of 5 year olds caries free and a higher mean dmft⁷⁰ than 5 year olds in the Other ethnic group.

12 year old children appear to have better oral health than 5 year olds, however Maori and Pacific children still have a poorer oral health status than children of other ethnicities.

5.10.1.3 Avoidable hospitalisations

The discharge rates for injury for Maori and Pacific children aged under 5 have increased. However, the rates are not significantly different from the district rate.

In the year to June 2003, the New Zealand child abuse rate was 7.4 per 1000 children aged 0 to 16 years. Maori children are more likely to be abused than non-Maori.

The preventable hospitalisation rate for children aged 5 to 14 is significantly higher for Pacific children in C&C DHB than Pacific children nationally (95% confidence). The rate for Pacific children is significantly higher than the district rate (95% confidence).

The ambulatory sensitive hospitalisation rates for children aged under 5 are significantly lower for all groups in C&C DHB than the national rates (95% confidence). The rate for Pacific children is significantly higher than the district rate (95% confidence).

The ambulatory sensitive hospitalisation rates for Maori and Pacific children aged 5 to 14 are significantly higher than the district rate (95% confidence).

⁷⁰ dmft = decayed, missing or filled teeth (dmft is for deciduous teeth, DMFT is for permanent teeth)

5.10.1.4 Cellulitis

The discharge rate for cellulitis has increased 28% in the years from 1996 to 2002, with the highest rates seen in Maori and Pacific children, and those living in high deprivation areas.

5.10.1.5 Teenage pregnancy

Maori and Pacific girls have significantly higher teenage pregnancy rates than the district rate (95% confidence).

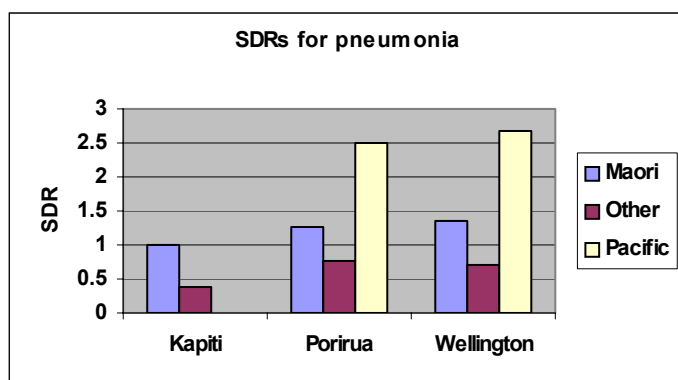
Pacific, Maori and Asian girls have a higher termination of pregnancy rate than the rate for all teenage girls in the district.

5.10.2 Introduction

Child health is an important area as there are specific problems that affect children. It is also important as many chronic health problems can be traced back to behaviour that is imbedded during childhood. Children in the Capital and Coast district are more likely to come from "higher need" populations. They are relatively more deprived than the rest of the population, and more likely to be of Maori or Pacific ethnicity.

5.10.3 Respiratory

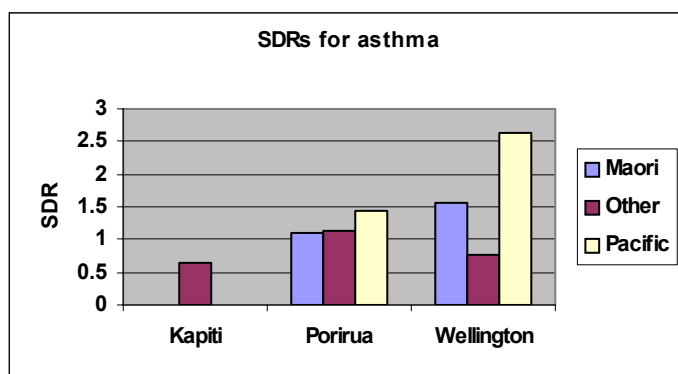
Standardised discharge ratios for pneumonia, 0-14 years, 2000/01 – 2002/03



Data source: Ministry of Health

Pneumonia is a significant problem for Pacific children who have 2½ times the district rate of discharges. Maori children also have higher rates of pneumonia discharges. For Maori children living in Wellington the discharge rate is 35% higher than the district rate and in Porirua the discharge rate is 27% higher. Children in the Other ethnic group have relatively low rates of discharge for pneumonia.

Standardised discharge ratios for asthma, 0-14 years, 2000/01 – 2002/03



Data source: Ministry of Health

Pacific children living in Wellington have more than 2½ times the district rate of discharges. For Pacific children living in Porirua the discharge rate is 43% higher than the district as a whole.

The rate for Maori children living in Wellington is 56% higher than the district as a whole.

5.10.4 Hearing loss

Data on hearing screening is not available for Capital and Coast alone, but only for Capital and Coast and Hutt Valley combined. A national target has been set that 95% of 5 year olds will pass school entry screening.

Percentage of children failing school entry hearing screening test

District Health Board	Failure Rate %					
	Overall	Maori	Pacific Island	Euro/ Pakeha	Asian	Other
Hutt / Capital Coast (01/02)	5.7	6.7	13.7	3.6	5.8	5.6
Hutt Capital Coast (02/03)	5.2	7.0	12.3	3.2	3.9	7.9
NATIONAL TOTALS (02/03)	8.1	12.6	16.1	5.6	3.9	7.2

**Data source: National Audiology Unit*

Nationally, the Capital and Coast/Hutt Valley area is one of three public health areas within 0.3% of the target 5% failure rate. The figures above show that the percentage failing school entry hearing tests is continuing to fall, and that Capital and Coast figures are better than national figures for all ethnic groups apart from Other.

Percentage of three year olds failing hearing tests by ethnicity, 2000/01⁷¹

District Health Board	2000/01 Three Year Old Failure Rates (%)			
	Overall	Maori	Pacific Is	Other
Hutt Valley/Capital Coast	4.4	7.6	8.2	3.5
New Zealand Totals:	6.3	13.1	11.4	4.7

Data source: National Audiology Unit

A similar pattern is seen for hearing screening of 3 year olds. All ethnic groups have a lower percentage of children failing than the national average. Maori and Pacific children have a high percentage of children failing compared to children in the Other ethnic group.

5.10.5 Oral health

Oral health status of 5 year old children in C&C DHB, 2003⁷²

Ethnicity	Target % Caries Free	Fluoridated		Non-Fluoridated	
		% Caries Free	Mean dmft	% Caries Free	Mean dmft
Maori	50%	42%	2.90	-	-
Pacific	43%	30%	3.78	-	-
Other	70%	68%	1.24	40%	1.10

⁷¹ C&C DHB, The health of children in Capital and Coast District Health Board, March 2004

⁷² C&C DHB, The health of children in Capital and Coast District Health Board, March 2004

Maori and Pacific groups have a significantly lower percentage of 5 year olds caries free than 5 year olds of other ethnicities. Children in the Other ethnic group have nearly reached the target for percentage caries free, however Maori children are 8% below target and Pacific children are 13% below target. Maori and Pacific children also have a higher mean dmft (decayed, missing & filled teeth) than children in the Other ethnic group. (Note that dmft is for deciduous teeth and DMFT is for permanent teeth.)

Oral health status of 12 year old children in C&C DHB, 2003⁷³

Ethnicity	Target Mean DMFT	Fluoridated		Non-Fluoridated	
		% Caries Free	Mean DMFT	% Caries Free	Mean DMFT
Maori	1.2	57%	1.15	-	-
Pacific	1.4	51%	1.12	-	-
Other	1	64%	0.78	75%	0.78

It appears that 12 year old children have better oral health than 5 year olds. All ethnicities have bettered the target for mean DMFT. Maori and Pacific children have an improved percentage caries free, however are still below children of other ethnicities.

5.10.6 Injuries

Unintentional injury is the leading cause of death for children aged 1-14 years in New Zealand, accounting for between 35-43% of all deaths in this age group. Between 1996 and 2000, 16 children aged 0-14 years in C&C DHB died as a result of unintentional injury. The cause of death is shown in the table below.

Mortality from unintentional injury in children 0-14 years, 1996-2000⁷⁴

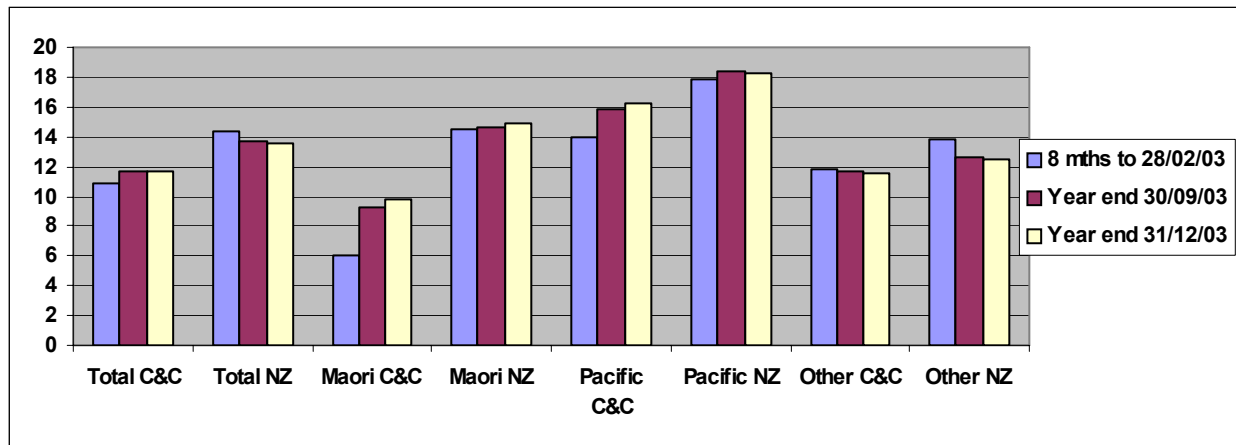
Age	Number	Cause
0-4 years	1	Fall
	1	Occupant in a motor vehicle
	1	Drowning
	5	Suffocation
	2	Fire/flame
5-9 years	1	Drowning
10-14 years	1	Occupant in a motor vehicle
	1	Pedal cyclist
	1	Natural/environmental
	1	Other transport
	1	Pedestrian, other

The majority of discharges for injury in children are due to fractures and lacerations from falls. A large number of injuries are also due to pedestrian, bike and car accidents.

⁷³ C&C DHB, The health of children in Capital and Coast District Health Board, March 2004

⁷⁴ C&C DHB, The health of children in Capital and Coast District Health Board, March 2004

Discharge rate per 1000 children for Injuries - children under 5

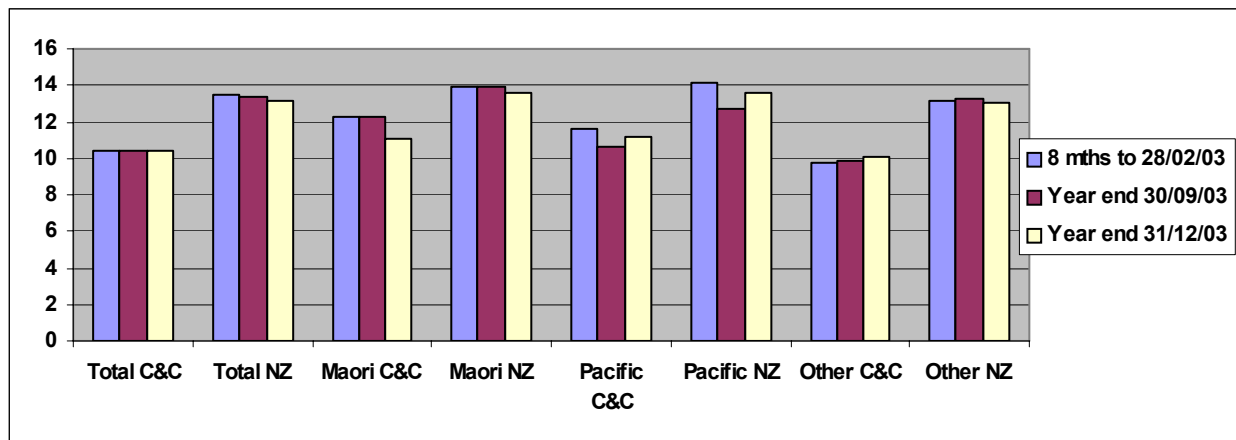


Data source: Ministry of Health

The overall discharge rate for injuries in children under five in the C&C DHB district is steady. Within this the rates for Maori and Pacific appear to be increasing and the rate for Other is decreasing. At a 95% confidence level, the rate for Maori children in C&C DHB is significantly lower than the national rate for Maori children. The rate for Pacific is not significantly different from the national rate for Pacific children.

C&C DHB rates for Maori and Pacific children are not significantly different to the district rate.

Discharge rate per 1000 children for Injuries - children 5 – 14



Data source: Ministry of Health

The overall discharge rate for injuries in children aged 5 to 14 in the C&C DHB district is steady. There has been a slight increase for Other, a decrease for Maori and the rate for Pacific is fluctuating. C&C DHB's rates are all lower than national rates. The rates for Maori and Pacific children in C&C DHB however, are not significantly different to the national rates for Maori and Pacific children.

The rates for Maori and Pacific in C&C DHB are not significantly higher than the district rate.

5.10.6.1 Violence

The following information is for children aged under 17 years assessed as abused (physically, emotionally, sexually) following a notification to the Department of Child, Youth and Family

Services.⁷⁵ In the year to June 2003, the national child abuse rate was 7.4 children per 1000 children aged 0-16 years. There is little difference by gender in rates of abuse for children under 10, but at age 14 to 16 girls are much more likely to be abused than boys (8.0 per 1000 compared to 3.9 per 1000 in 2003).

Maori children are more likely to be abused than non-Maori children. In 2003 the child abuse rate was 11.9 per 1000 children for Maori, and 5.9 per 1000 children for non-Maori. The rates are not available for Pacific children, however they do not appear to be over-represented among children assessed as abused. In 2003 Pacific children accounted for 11% of cases, which is similar to their proportion of the child population.

Hospitalisations for injury due to violence, 0-14 years, 2000/01 – 2002/03

No. discharges	Kapiti	Porirua	Wellington	C&C DHB
Maori	0	3	1	4
Other	6	3	10	19
Pacific	0	1	2	3
All ethnicities	6	7	13	26

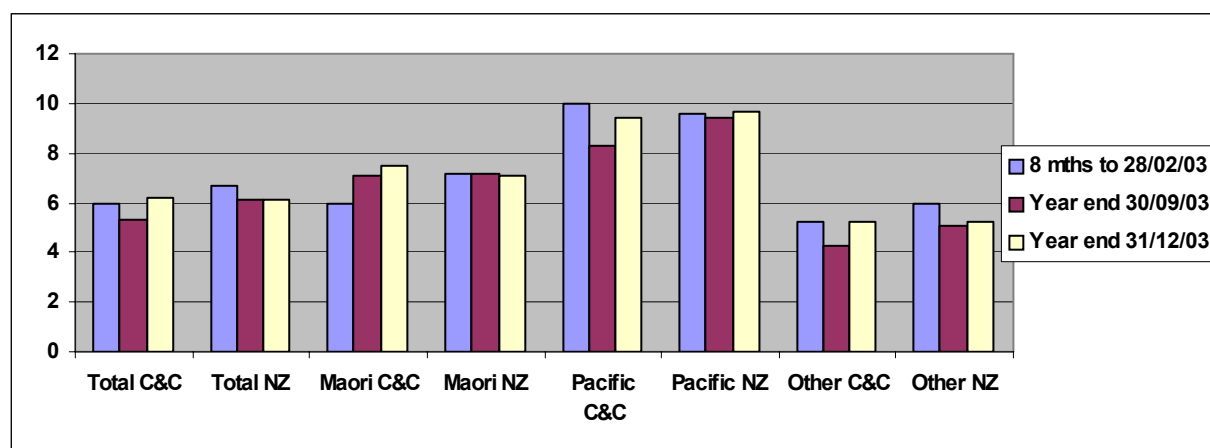
Data source: Ministry of Health

There is some variation between years, although it is difficult to identify trends as the numbers are so small.

5.10.7 Preventable hospitalisation

Preventable hospitalisations result from diseases preventable by population-based health promotion strategies, such as smoking cessation.

Preventable hospitalisations per 1000 children – children under 5



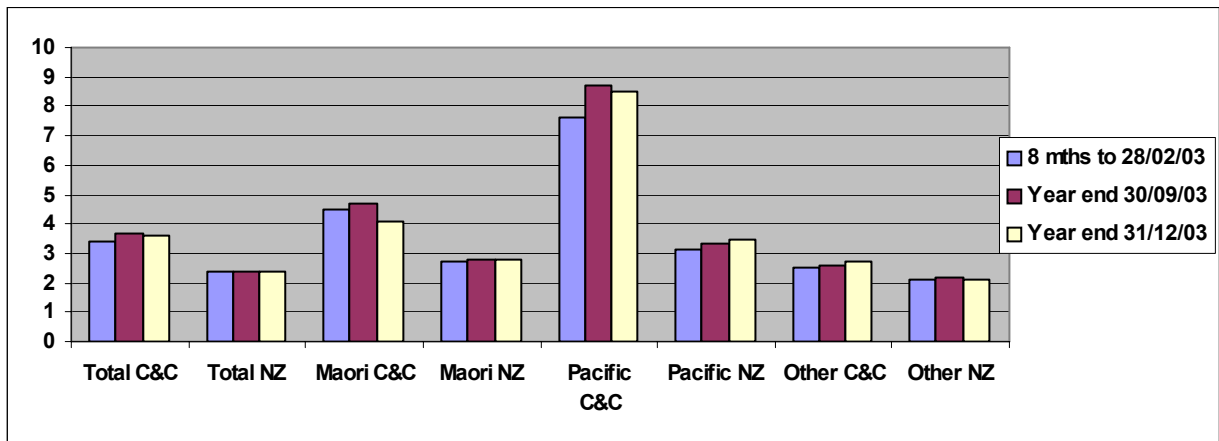
Data source: Ministry of Health

Discharge rates for preventable hospitalisations for children under five are fluctuating and are similar to national rates. The rate for Maori children in C&C DHB is increasing. Rates in C&C DHB are not significantly different from national rates.

The rates for Maori and Pacific children aged under 5 in C&C DHB are not significantly different from the rate for all children aged under 5 in the district.

⁷⁵ Ministry of Social Development, CYRAS

Preventable hospitalisation per 1000 children – children 5 – 14 years



Data source: Ministry of Health

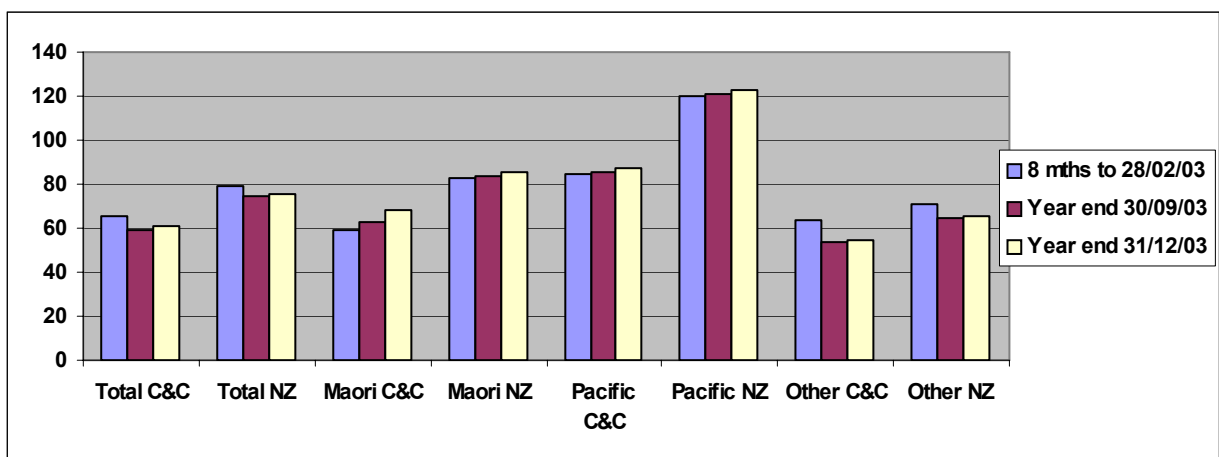
Discharge rates for preventable hospitalisations for children aged five to 14 are higher than national rates. The rates for Maori and Pacific children are fluctuating and the rate for Other is increasing. At a 95% level of confidence the rate for Pacific children in C&C DHB is significantly higher than the rate for Pacific children nationally. The rate for Maori children is not significantly different from Maori children nationally.

At a 95% level of confidence the rate for Pacific children aged 5 to 14 in C&C DHB is significantly higher than the rate for all children aged 5 to 14 in the district. The rate for Maori children aged 5 to 14 is not significantly different from the district rate.

5.10.8 Ambulatory sensitive hospitalisations

Ambulatory sensitive hospitalisations are sensitive to prophylactic or therapeutic interventions delivered in a primary health care setting, for example, early diagnosis and control of diabetes.

Ambulatory-sensitive hospitalisations per 1000 children – children under 5

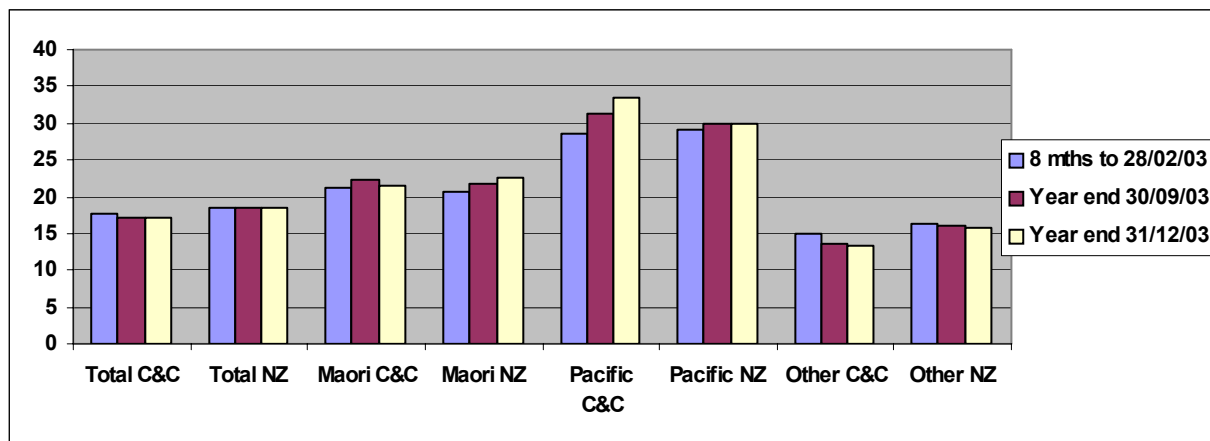


Data source: Ministry of Health

Rates of ambulatory sensitive hospitalisations for children under five are lower than national rates for all groups. Rates for Maori and Pacific are increasing, while those for Other are fluctuating. At a 95% confidence level rates for all groups in C&C DHB are significantly lower than national rates.

At a 95% level of confidence the rate for Pacific children aged under 5 in C&C DHB is significantly higher than the rate for all children aged under 5 in the district. The rate for Maori children aged under 5 is not significantly different from the district rate.

Ambulatory sensitive hospitalisations per 1000 children – children 5 – 14 years



Data source: Ministry of Health

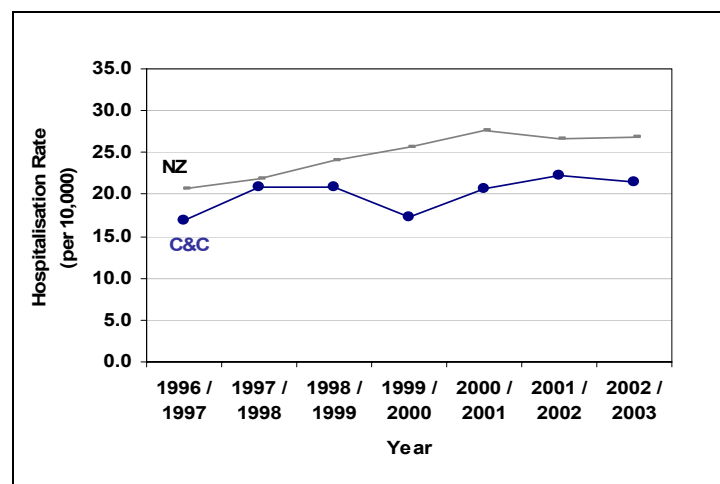
The overall rate of ambulatory sensitive hospitalisations for children 5 – 14 is lower than the national rate. Within this, the Maori rate is fluctuating, the Pacific rate is increasing and the rate for Other is decreasing. The rates for Maori and Pacific children in C&C DHB are not significantly different from the rates for Maori and Pacific children nationally.

At a 95% level of confidence the rates for Pacific and Maori children aged 5 to 14 in C&C DHB are significantly higher than the rate for all children aged 5 to 14 in the district.

5.10.9 Cellulitis⁷⁶

The definition of cellulitis used here is broad (eg. includes conditions such as cutaneous abscesses and impetigo), and matches the set of ICD codes identified by the Ministry of Health for DHB performance indicators.

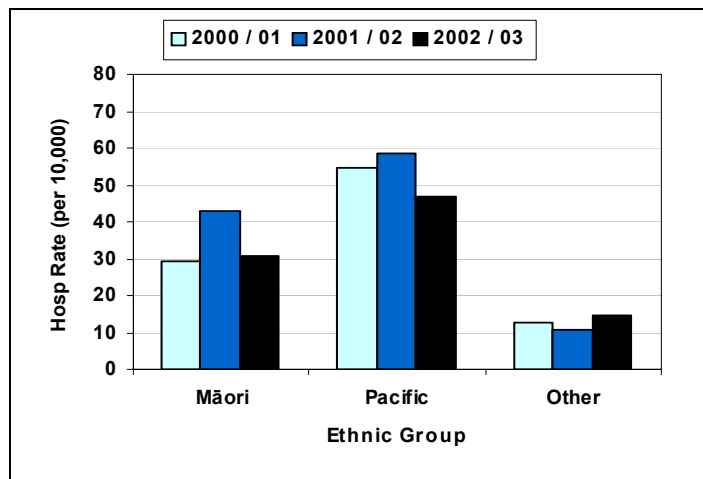
Cellulitis discharges, 1-14 years, 1996-2002



⁷⁶ Dr Darren Hunt, *Assessing and reducing the burden of serious skin infections in children and young people in the Greater Wellington Region.*

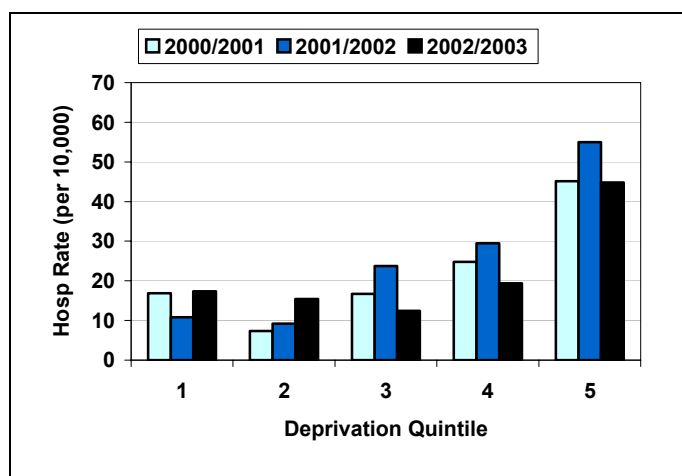
The hospitalisation rate for cellulitis is lower than the national rate, however the rate has increased by 28% in the years from 1996 to 2002. The number of discharges has increased by 34% overall, from 80 to 107 discharges per year. Boys have slightly higher discharge rates than girls.

Cellulitis discharges by ethnicity, C&C DHB, 2000/01-2002/03



Pacific children have the highest rate of discharge for cellulitis. Both Pacific and Maori children have a higher rate than children in the Other ethnic group.

Cellulitis discharges by deprivation quintile, C&C DHB, 2000/01-2002/03

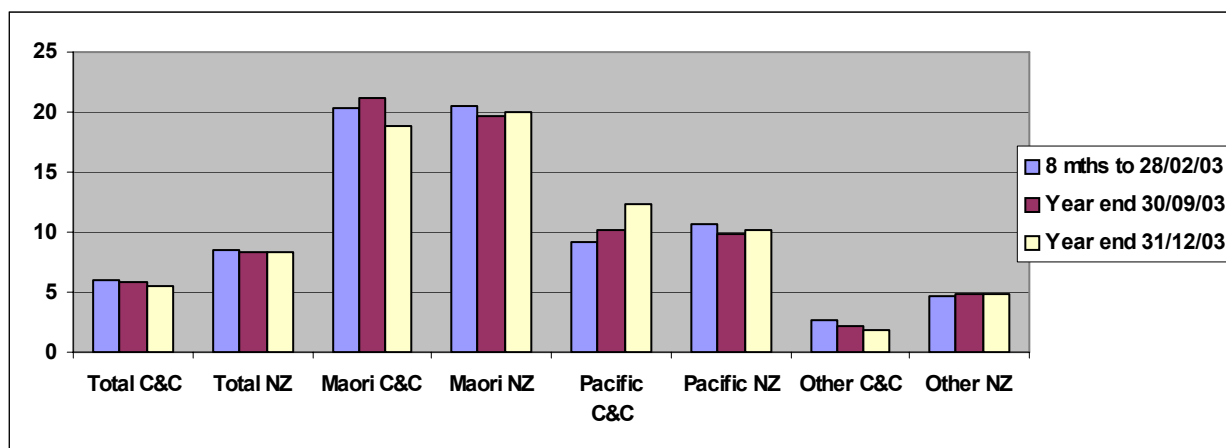


Higher rates of hospitalisation for cellulitis are seen in areas with higher levels of deprivation. This indicates that poverty is likely to contribute to serious skin infections in children. Factors that may be contributing to cellulitis hospitalisations include:

- damp, overcrowded housing
- insect bites, and conditions for insects to thrive
- first aid and wound care - ability to buy supplies and knowledge
- access to adequate handwashing facilities (eg. in schools)
- chronic skin conditions such as eczema
- access to medical care

5.10.10 Teenage pregnancies

Discharge rate per 1000 teenagers – teenage pregnancies, 13-17 years, C&C DHB⁷⁷

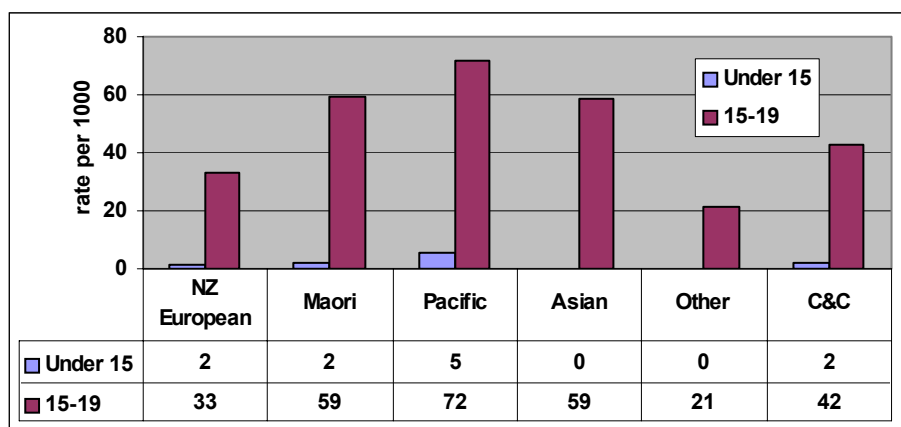


Data source: Ministry of Health

The overall rate of discharges for teenage pregnancies is decreasing slightly. Within this the rate for Maori is fluctuating, the rate for Other is decreasing, and the rate for Pacific is increasing. C&C DHB's rates are lower than national rates for all groups except Pacific. Rates for Maori and Pacific girls in C&C DHB are not significantly different from national rates for Maori and Pacific.

At a 95% level of confidence the rates for Maori and Pacific girls in C&C DHB are significantly higher than the district rate.

Termination of pregnancy rate per 1000 teenagers, 13-19 years, C&C DHB 2002



Pacific, Maori and Asian teenage girls have higher termination of pregnancy rates than the rate for all teenage girls in the district.

Further information

For a more detailed assessment of child health, see the report 'The Health of Children in Capital & Coast District Health Board – A Background Document', March 2004.⁷⁸

⁷⁷ 13-17 year olds giving birth in a public hospital

⁷⁸ Can be found at <http://www.ccdhb.org.nz/docs/ChildHealthReportMay2004.pdf>

5.11 Health of older people

5.11.1 Introduction

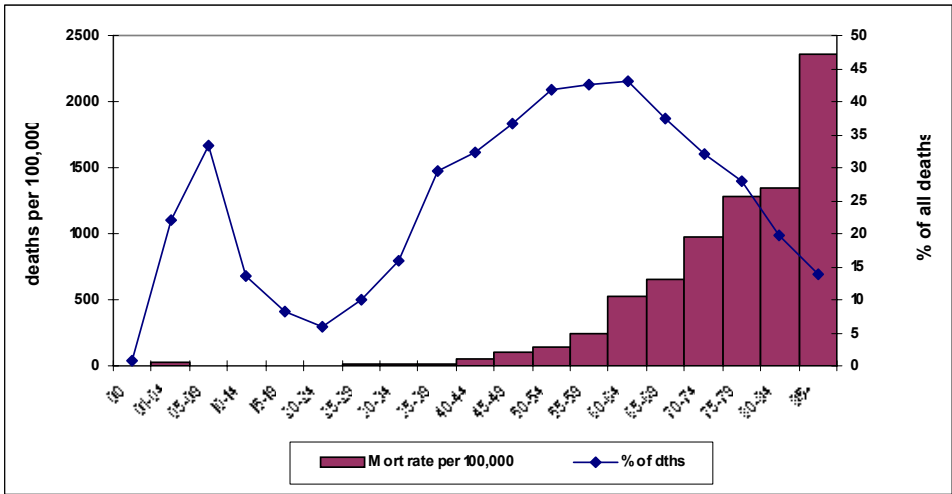
The population aged over 65 years is predicted to increase by over 10% in the next five years, and by 2021 will account for over 15% of the district population. As the population ages, the health of older people will become an even bigger issue, with an increase in chronic conditions that affect the elderly. Older people have a high incidence of conditions such as cardiovascular disease (see section 5.2), cancer (see section 5.3), diabetes (see section 5.4) and respiratory conditions (see section 5.7).

Cardiovascular disease is the leading cause of death for people aged 40 and over, and the mortality rate increases with age (42% of deaths 60-79 years, 51% of deaths 80+ years). It is also the leading cause of discharge to hospital for people aged 60 years and over. Men are affected by cardiovascular disease at an earlier age than women. Maori and Pacific people have poorer cardiovascular health than non-Maori non-Pacific.

Mortality rates for ischaemic heart disease are decreasing steadily and stroke is declining slowly, however the same decrease has not been seen for heart failure (a condition affecting mainly elderly people). The main conditions for which people are admitted to hospital are angina, myocardial infarction, heart failure and stroke.

Cancer registrations are increasing for all types of cancer except lung and cervical cancer. Cancer is the second leading cause of death for people aged 40 and over and the mortality rates increase with age, as is shown in the graph below.

Cancer mortality rates and proportion of all deaths, C&C DHB, 1988-2000



Data source: Ministry of Health

Lung cancer and colo-rectal cancer are the leading cancers in C&C DHB mortality statistics. Lung cancer registrations are decreasing, however Maori and Pacific people have higher rates of lung cancer than people of other ethnicities.

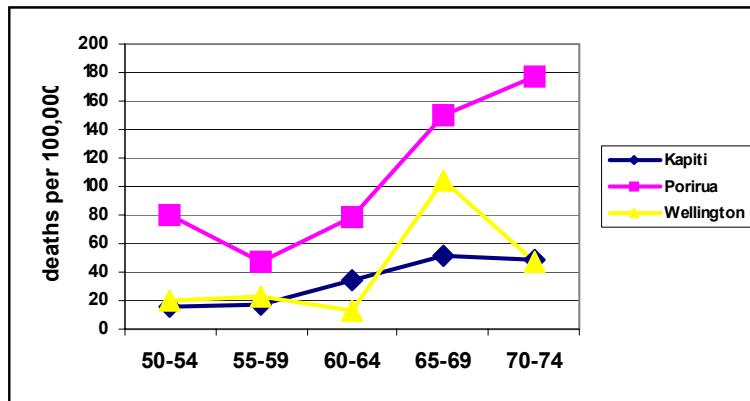
While historically, colo-rectal cancer mortality rates have been highest for Other, there is evidence to show that national rates for Maori and Pacific have increased steadily and have now caught up.

Breast cancer is the fourth largest cause of cancer death in the district. Breast cancer registrations have been increasing and are now equivalent to the national rate. Maori and Pacific women have high rates of hospitalisation for breast cancer. Rates of prostate cancer

in men have increased dramatically in the last decade, tripling in the years from 1991 to 2000.

Diabetes is another condition affecting older people. The chart below shows diabetes mortality rates increasing with age. The mortality rate in C&C DHB has increased dramatically since 1988 and has now caught up to the national rate. Discharges from hospital for diabetes are also increasing rapidly.

Diabetes mortality by TLA, 50-74 years, 1998-2000

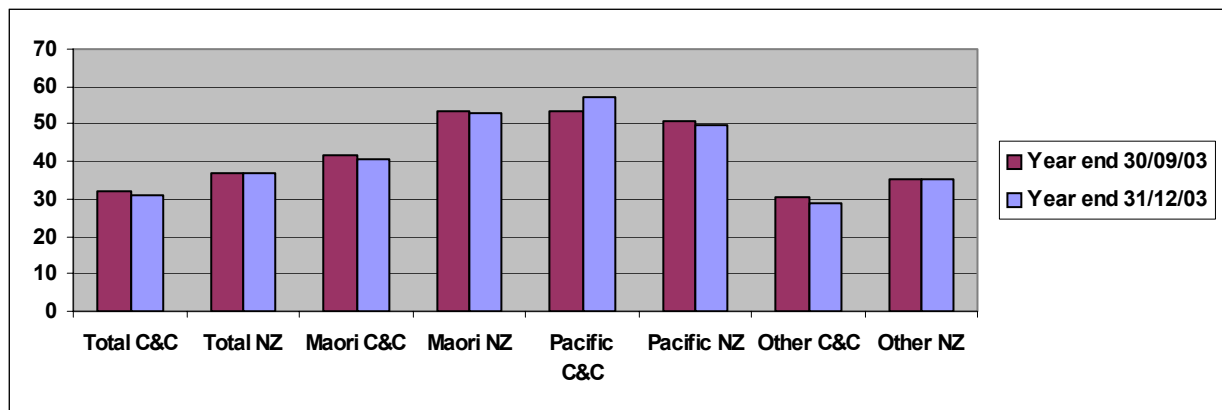


Data source: Ministry of Health

For more information on specific conditions affecting older people, refer back to the relevant sections in this chapter.

5.11.2 Avoidable hospitalisations

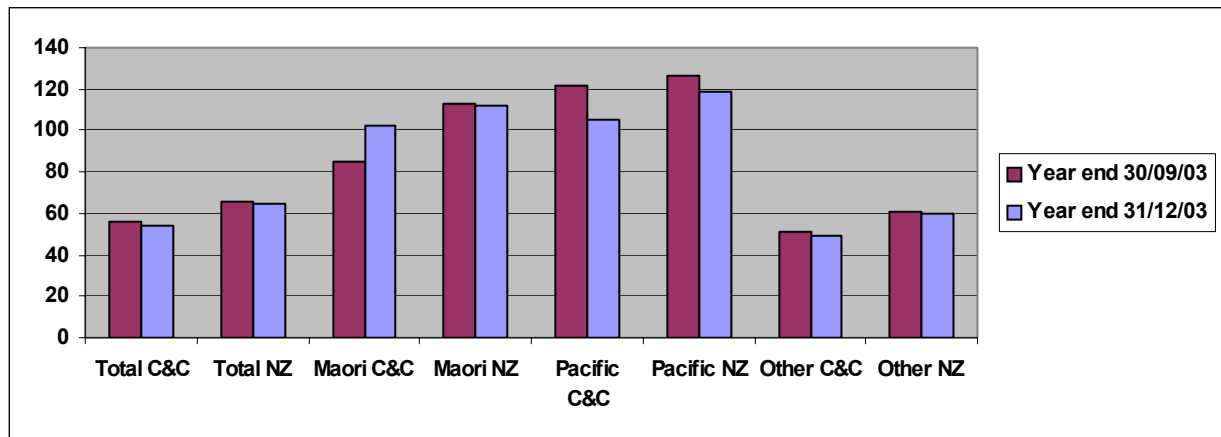
Discharge rate per 1000 population – preventable hospitalisations 65-74 years



Data source: Ministry of Health

The overall preventable hospitalisation rate for people aged 65-74 years in C&C DHB is lower than the national rate. However, within this Pacific people have a higher rate than the rate for Pacific nationally. Older people of Maori and Pacific ethnicities have a higher discharge rate than other ethnicities.

Discharge rate per 1000 population – ambulatory sensitive hospitalisations 65-74 years



Data source: Ministry of Health

Ambulatory sensitive hospitalisation rates for people aged 65-74 years are lower for all groups in C&C DHB than national rates. The rate for Maori in Capital and Coast has increased, whilst the rate for Pacific in the district has shown a decrease.

5.11.3 Service use by the 50+ age group

The 50+ age group are a major user of health services. Their utilisation of health services is outlined below.

5.11.3.1 In-patient services

In total those aged 50 and over generated 9695 in-patient events in the 2002/2003 financial year. Of these Kapiti residents accounted for 27% of visits, Porirua residents accounted for 19% of visits and Wellington residents accounted for 54% of visits.

Kapiti

Of the in-patient events for Kapiti residents aged 50 or over, 2% were for Maori, less than 1% were for Pacific and 97.7% were for Other ethnicities.

The 50-64 age group made up 17% of visits, the 65-74 age group made up 27% of visits, the 75-79 age group made up 17% of visits and the 80+ age group made up 39% of visits.

Porirua

Of the in-patient events for Porirua residents aged 50 or over, 13% were for Maori, 18% were for Pacific and 69% were for Other ethnicities.

The 50-64 age group made up 39% of visits, the 65-74 age group made up 30% of visits, the 75-79 age group made up 14% of visits and the 80+ age group made up 17% of visits.

Wellington

Of the in-patient events for Wellington residents aged 50 or over, 4% were for Maori, 4% were for Pacific and 92% were for Other ethnicities.

The 50-64 age group made up 29% of visits, the 65-74 age group made up 26% of visits, the 75-79 age group made up 16% of visits and the 80+ age group made up 29% of visits.

5.11.3.2 Out-patient services

In total those aged 50 and over attended 54,624 outpatient appointments in the 2002/2003 financial year. Of these Kapiti residents accounted for 21% of visits, Porirua residents accounted for 20% of visits and Wellington residents accounted for 59% of visits.

Kapiti

Of the in-patient events for Kapiti residents aged 50 or over, 2% were for Maori, less than 1% were for Pacific and 97.7% were for Other ethnicities.

The 50-64 age group made up 24% of visits, the 65-74 age group made up 34% of visits, the 75-79 age group made up 20% of visits and the 80+ age group made up 22% of visits.

Porirua

Of the in-patient events for Porirua residents aged 50 or over, 16% were for Maori, 22% were for Pacific and 62% were for Other ethnicities.

The 50-64 age group made up 46% of visits, the 65-74 age group made up 31% of visits, the 75-79 age group made up 12% of visits and the 80+ age group made up 11% of visits.

Wellington

Of the in-patient events for Wellington residents aged 50 or over, 6% were for Maori, 6% were for Pacific and 88% were for Other ethnicities.

The 50-64 age group made up 39% of visits, the 65-74 age group made up 31% of visits, the 75-79 age group made up 14% of visits and the 80+ age group made up 16% of visits.

5.11.3.3 Emergency Department

There were 6307 emergency department events for people aged 50 and over in FY2002/2003. Of these Kapiti residents accounted for 12% of visits, Porirua residents accounted for 19% of visits and Wellington residents accounted for 69% of visits.

The 50-64 age group made up 44% of visits, the 65-74 age group made up 25% of visits, the 75-79 age group made up 11% of visits and the 80+ age group made up 20% of visits.

Kapiti

Of emergency department events for Kapiti residents aged 50 and over, 3% were for Maori, less than 1% were for Pacific and 96% were for other ethnicities.

The 50-64 age group made up 27% of visits, the 65-74 age group made up 26% of visits, the 75-79 age group made up 13% of visits and the 80+ age group made up 34% of visits.

Porirua

Of emergency department events for Porirua residents aged 50 and over, 14% were for Maori, 20% were for Pacific and 66% were for other ethnicities.

The 50-64 age group made up 54% of visits, the 65-74 age group made up 23% of visits, the 75-79 age group made up 9% of visits and the 80+ age group made up 14% of visits.

Wellington

Of emergency department events for Wellington residents aged 50 and over, 5% were for Maori, 5% were for Pacific and 90% were for other ethnicities.

The 50-64 age group made up 44% of visits, the 65-74 age group made up 25% of visits, the 75-79 age group made up 12% of visits and the 80+ age group made up 19% of visits.

5.11.3.4 Capital Support

Of the budget for the 50+ age group, the weekly spend, including subsidised people, is distributed as shown in the table below.

Capital Support weekly budget 50+ age group

WEEKLY FUNDING BANDS	50+ AGE GROUP
Low (0 - \$30)	25%
Medium (\$30 - \$180)	25%
High (\$180 - \$360)	4%
Very high (\$360 - \$650)	20%
Extremely high (\$650+)	18%
Not stated	8%

In total the 50+ age group comprises 4358 people, 82% of Capital Support's workload. Of the total days of service provided through Capital Support for all patients attending this service, 2% were for Maori, 2% were for Pacific, and the remaining 96% were for people of Other ethnicities. Note that the 'days of service' equates to cumulative days of service from current service recipients. Approximately 30% of people who receive services through Capital Support are in residential care.

5.11.3.5 Community Health Services (CHS)

There were 67,110 episodes of CHS provided to a total of 4079 people aged 50 and over in 2003. This accounts for approximately 73% of CHS total volumes. Of these Kapiti residents made up 35% of episodes, Porirua residents made up 17% of episodes and Wellington residents made up 48% of visits.

The 50-64 age group made up 20% of visits, the 65-74 age group made up 23% of visits, the 75-79 age group made up 13% of visits and the 80+ age group made up 44% of visits.

In Kapiti, the contact breakdown is as follows:

- non-palliative treatments accounted for 29% of events.
- wound care accounted for 28% of events .
- phone calls 18% of events (probably relates to high need for co-ordination).
- leg ulcer treatments accounted for 9% of events.
- palliative treatment accounted for 8% of events.
- domiciliary assessments 4%.
- the final 4% consisted mainly of out-patient attendances, home IV's, home O₂ and supplies.

In Porirua, the contact breakdown is as follows:

- wound care accounted for 30% of events.
- non-palliative treatments accounted for 24% of events.

phone calls 22% of events (probably relates to high need for co-ordination).

palliative treatment accounted for 10% of events.

leg ulcer treatments accounted for 6% of events.

domiciliary assessments 3%.

the final 5% consisted mainly of outpatient attendances, home IV's, home O₂ and supplies.

In Wellington, the contact breakdown is as follows:

wound care accounted for 24% of events.

non-palliative treatments accounted for 23% of events.

phone calls 20% of events (probably relates to high need for co-ordination).

palliative treatment accounted for 8% of events.

leg ulcer treatments accounted for 8% of events.

Supplies accounted for 6% of events.

domiciliary assessments 4%.

the final 7% consisted mainly of outpatient attendances, home IV's, home O₂ and supplies.

Across the region wound care and leg ulcer treatment made up 34.6% of events, non-palliative treatments made up 25% of treatments and phone calls made up 20% of events

Note that about 50% of services provided by the Kenepuru CHS team are to patients living in Wellington.

5.11.3.6 DSS AT&R and DSS Therapies

There were 28,744 episodes of DSS ATR/Therapies provided for a total of 3142 people aged 50 and over in 2003. This accounts for at least 75% of DSS/ATR and DSS Therapies total volumes. Of these Kapiti residents made up 32% of episodes, Porirua residents made up 19% of episodes and Wellington residents made up 41% of visits.

The 50-64 age group made up 11% of visits, the 65-74 age group made up 22% of visits, the 75-79 age group made up 15% of visits and the 80+ age group made up 52% of visits.

5.11.3.7 Personal Health Therapies

There were 9160 episodes of Therapies provided for a total of 2360 people aged 50 and over in 2003. This accounts for approximately 75% of Therapies total volumes. Of these Kapiti residents made up 28% of episodes, Porirua residents made up 20% of episodes and Wellington residents made up 52% of visits.

The 50-64 age group made up 25% of visits, the 65-74 age group made up 26% of visits, the 75-79 age group made up 16% of visits and the 80+ age group made up 33% of visits.

5.11.3.8 Home Support

There were 20321 episodes of Therapies provided for a total of 979 people aged 50 and over in 2003. This accounts for approximately 87% of Home supports total volumes. Of these Kapiti residents made up 35% of episodes, Porirua residents made up 14% of episodes and Wellington residents made up 51% of visits.

The 50-64 age group made up 14% of visits, the 65-74 age group made up 32% of visits, the 75-79 age group made up 16% of visits and the 80+ age group made up 38% of visits.

The multiple use of community services by the 50+ age group (including the 'complex group') was as follows:

6176 (63%) – used one service (mainly through Capital Support).

2211 (22.6%) - used two services (mainly through Capital Support and ATR).

923 (9.4%) - used three services (mainly through Capital Support, ATR and Therapies).

462 (5%) - used four or more services.

The majority of referrals for these services came from primary or community based providers or from within CHS itself, as opposed to an in-patient setting.

5.11.4 The 'complex' group

The population aged 50+ is a large user of health services, but within this group there is a 'complex' group of people (around 1.6% of the 50+ population) who are major users of health services.

The 'complex' group is defined as people having:

Between one and three hospital discharges AND two or more co-morbidities from the diagnostic groups listed below (calculated from in-patient DRGs):

- CHRONIC RESPIRATORY DIAGNOSES
- CARDIO-VASCULAR DISEASES
- DIABETES
- CELLULITIS
- MUSCULOSKELETAL – ie Osteoarthritis/Rheumatoid Arthritis
- Other coding including Dementia/Alzheimers/Parkinsons/falls.

Or

Four or more hospital discharges (for people aged over fifty, excluding Mental health, Obstetrics, Gynaecology, Haematology, Ophthalmology, ENT, and Oncology related discharges).

During the 2002/03 financial year the complex group accounted for:

27.8% of in-patient discharges for the 50+ age group.

9.1% of emergency department attendances.

11% of out-patient attendances.

6.8% of days service through Capital Support⁷⁹.

15.1% of Personal Health (PH) funded CHS.

14% of Disability Support Services (DSS) funded Assessment Treatment Rehabilitation and Therapies.

13% of PH funded Home Support.

12.4% of PH funded therapies.

The geographic and service breakdown is as follows:

5.11.4.1 Kapiti

The complex group makes up 1.6% of the population over 50. During the 2002/03 financial year the complex group accounted for 28.6% of in-patient discharges⁸⁰, 9.8% of outpatient attendances, 12.4% of emergency department attendances and 6.8% days service through Capital Support

5.11.4.2 Porirua

The complex group makes up 1.9% of the population over 50. During the 2002/03 financial year the complex group accounted for 29.9% of in-patient discharges, 14.6% of outpatient attendances, and 8.8% of emergency department attendances. 6.8% days service through Capital Support

5.11.4.3 Wellington

The complex group makes up 1.3% of the population over 50. During the 2002/03 financial year the complex group accounted for 26.7% of in-patient discharges, 10.2% of out-patient attendances, 8.7% of emergency department attendances and 6.8% days service through Capital Support

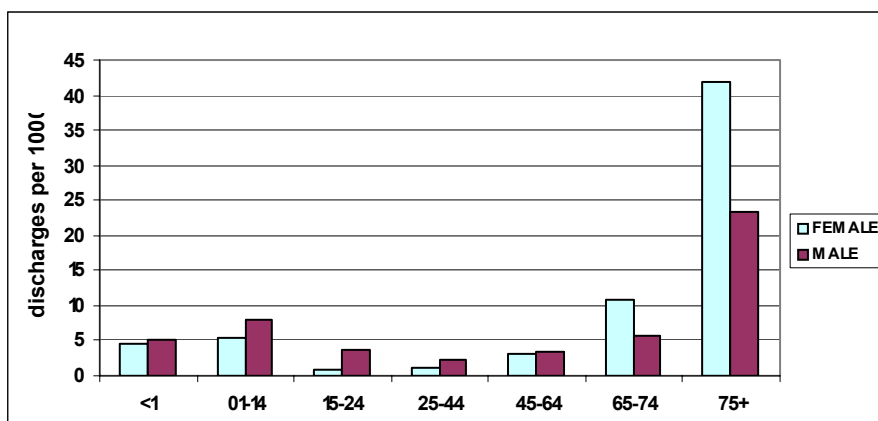
5.11.5 Falls

Falls are a major cause of hospitalisation in people aged 50 and over.

⁷⁹ This relates to consecutive days of service received through Capital Support

⁸⁰ excluding Mental health, Obstetrics, Gynaecology, Haematology, Ophthalmology, ENT, and Oncology related discharges

Discharge rate for falls, C&C DHB 2000/01 – 2001/02

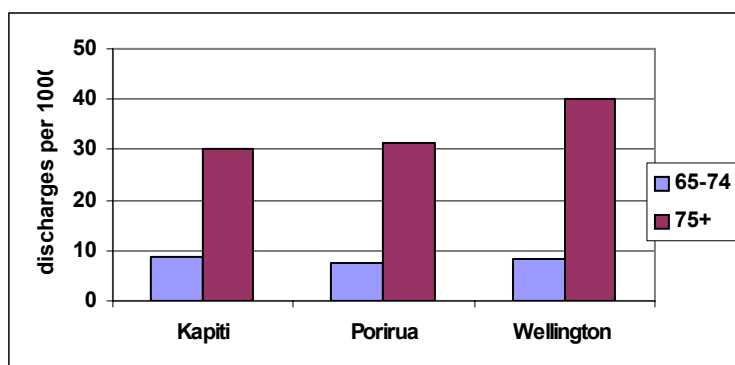


Data source: NMDS

The elderly (aged 75 years and over) and elderly females in particular have the highest discharge rate for falls.

5.11.5.1 Rates by Territorial Local Authority

Falls discharges by TLA, 2000/01 – 2001/02



Data source: NMDS

The 75+ age group has a significantly higher discharge rate for falls than the 65-74 age group. The elderly population living in Wellington have the highest rate of falls discharges.

5.11.5.2 Ethnic group

The actual numbers of falls recorded for Maori and Pacific elderly are very low, as are the populations of elderly Maori and Pacific people. This makes the rates per thousand of population statistically unreliable. The actual numbers are shown for comparison.

Falls recorded in inpatient data, C&C DHB 2000/01 – 2001/02

AGEBAND	Maori	Other	Pacific
65-74	9	215	7
75+	3	812	3

Data source: NMDS

5.11.5.3 Hip fractures in those 65 years old and over

The number of fractures has increased by 19% in 2001/02 as compared with 2000/01. The increase is entirely in the female population, with an increase of 29% in the number of cases, and particularly in the very elderly age group (85+). The number of fractures for males actually decreased by 7%.

Discharges for falls 2000/01 – 2001/02

agegroup	2000/2001		2001/2002	
	Female	Male	Female	Male
65-69	6	2	3	0
70-74	9	2	6	3
75-79	14	6	18	2
80-84	18	3	19	11
85+	25	14	47	9
total	72	27	93	25

Data source: NMDS

Other conditions that affect older people include cardiovascular conditions, cancer, respiratory conditions and diabetes. For further information on these, please refer to the relevant sections in chapter five.

Chapter 6: Maori

6.1 Overview

6.1.1 Cardiovascular

The angina discharge rate for Maori living in Porirua is twice the district rate. Maori living in Wellington have a 40% higher discharge rate than the district rate.

Maori living in Wellington have a myocardial infarction discharge rate that is 20% higher than the district rate. Maori living in Porirua have a rate that is 70% higher than the district rate.

Maori living in Porirua have a 38% higher stroke discharge rate than the district rate.

Maori living in Porirua have a heart failure discharge rate that is 5 times the district rate. Maori living in Wellington have a rate that is over 2½ times the district rate.

6.1.2 Cancer

Maori women living in Porirua have a breast cancer discharge rate that is 40% higher than the district rate. Maori women living in Wellington have a discharge rate that is 54% higher than the district rate.

Maori women in C&C DHB have reduced breast screening coverage.

Maori living in Wellington have a lung cancer discharge rate that is twice the district rate. Maori living in Porirua have a discharge rate that is 3 times the district rate.

Lung cancer registrations for Maori are 2½ times the district rate.

The cervical screening coverage rate⁸¹ for Maori women is only 48% which is significantly below the target of 80% unadjusted and 85% adjusted for hysterectomy.

6.1.3 Diabetes

Maori living in Porirua have over 4 times the district rate of diabetes discharges. The rate for Maori living in Wellington 21% higher than the district rate.

Nationally, the Maori discharge ratios for lower limb amputation are higher than for non-Maori.

6.1.4 Population health

Smoking prevalence for Maori is the highest of all ethnic groups. In 2002, 49% of Maori adults were smokers.

Young Maori females have particularly high smoking rates. 42% of Maori females aged 14-15 are at least weekly smokers.

Maori adults had a higher percentage of obesity than the percentage for "Other" adults.

Maori children had higher percentages of overweight and obesity than the percentages for "Other" children

⁸¹ The coverage rate is the proportion of women who have had a cervical smear recorded on the National Cervical Screening Programme (NCSP) Register in the 36 months prior to the end of the reporting period.

Maori are amongst the most active with 71% of young Maori and 67% of Maori adults considered active.

On average, young Maori are active for 7.7 hours a week and Maori adults are active for 10.9 hours a week.

Maori have a higher rate of meningococcal notifications (13 per 100,000 population) compared to the district as a whole (9 per 100,000 population).

6.1.5 Suicide

Over 90% of Maori suicides are people aged under 45.

40% of Maori suicides are people aged under 25.

Nationally, Maori have a slightly higher discharge rate for intentional self-harm than the total population.

6.1.6 Respiratory

Maori living in Wellington have a discharge rate for respiratory infections that is 60% higher than the district rate. Maori living in Porirua have a discharge rate that is 83% higher than the district rate.

Maori living in Porirua have an asthma discharge rate that is 66% higher than the district rate. Maori living in Wellington have more than twice the district rate.

The CORD discharge rate for Maori living in Wellington is more than 2½ times the district rate.

The CORD discharge rate for Maori living in Porirua is more than three times the district rate.

6.1.7 Child health

6.1.7.1 Respiratory

Maori children living in Wellington have a pneumonia discharge rate that is 35% higher than the district rate. Maori children living in Porirua have a discharge rate that is 27% higher than the district rate.

Maori children living in Wellington have an asthma discharge rate that is 56% higher than the district rate. Maori children living in Porirua have a discharge rate that is 11% higher than the district rate.

6.1.7.2 Hearing and oral

The percentage of Maori children failing hearing screening in C&C DHB/HVDHB is lower than the percentage for Maori children nationally, but above the percentage for the district as a whole.

Fewer Maori children are caries free than children in the Other ethnic group.

Maori children have a higher mean DMFT than Other.

6.1.7.3 Injuries

The discharge rates for injuries in Maori children in C&C DHB are not significantly different from the district rate (95% confidence level).

In 2003 the national child abuse rate for Maori was 11.9 per 1000 children compared to 5.9 per 1000 children for non-Maori.

In the years from 2000/01 to 2002/03, there were 4 Maori children admitted to hospital for injuries due to violence (15.8 per 100,000 population).

6.1.7.4 Avoidable hospitalisations

The preventable hospitalisation rates for Maori children in C&C DHB are not significantly different from either the district rate or the national Maori rate (95% confidence level).

The ambulatory sensitive hospitalisation rate for Maori aged 5 to 14 in C&C DHB is significantly higher than the district rate (95% confidence level).

6.1.7.5 Cellulitis

Maori children have higher discharge rates for cellulitis than children in the Other ethnic group.

6.1.7.6 Teenage pregnancies

At a 95% level of confidence, the teenage pregnancy discharge rate for Maori girls is significantly higher than the district rate.

The termination of pregnancy rate for Maori girls is higher than the rate for all teenage girls in the district.

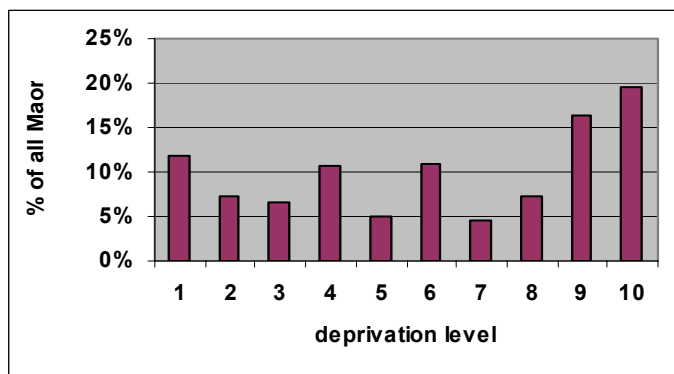
6.2 Introduction

There were 24,222 Maori living in the Capital and Coast district at the last census count, accounting for 9.9% of the district population.

The Maori population is relatively young in comparison to the total population and life expectancy for Maori is lower than that for non-Maori non-Pacific. Life expectancy for a Maori female is 73.2 years compared to 81.9 for a non-Maori female. For Maori males, life expectancy is 69 years compared to 77.2 years for a non-Maori male.

There is a large Maori population living in Porirua, making up 20% of the total Porirua population. Many Maori living in Porirua are living in areas of high deprivation. The distribution of the district Maori population across the deprivation scale is shown in the graph below.

Maori deprivation distribution, C&C DHB, 2001



Data source: Statistics New Zealand

19% of the Maori population are living in the most deprived areas (NZDep 10) and a further 16% live in NZDep 9 areas.

Maori have lower mean incomes than European and Asian people, and have high levels of dependency on the Domestic Purposes Benefit. For information on age, income and qualifications for different iwi in the district, refer to chapter 3 section 3.6.

Maori generally have poorer health outcomes than non-Maori non-Pacific people. The following sections contain a summary of priority areas where Maori are shown to have high need.

6.3 Cardiovascular

6.3.1 Angina

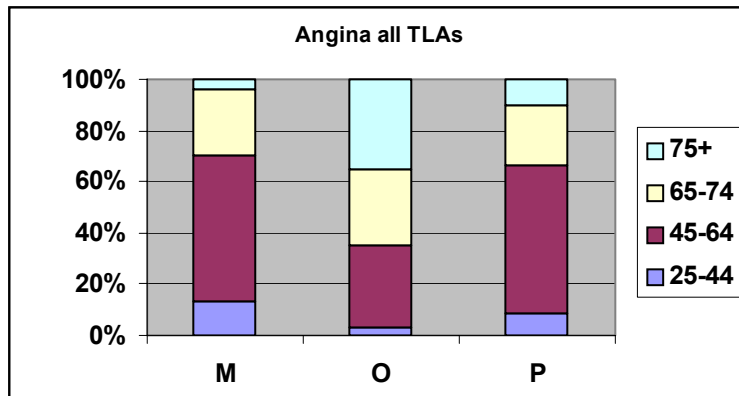
Angina standardised discharge ratios 2002/03

SDRs	Kapiti	Porirua	Wellington
Maori		1.98	1.40
Pacific		0.91	1.35
Other	1.10	1.05	0.91

Data source: Ministry of Health

The angina discharge rate for Maori living in Porirua is twice that of the district as a whole. Maori living in Wellington have a 40% higher discharge rate than the district population.

Angina discharges by age and ethnicity 2000/01 - 2002/03



Data source: Ministry of Health

Around 70% of Maori admitted for angina are aged under 65. The pattern is similar for Pacific but only 35% of people in the Other ethnic group are aged under 65.

6.3.2 Myocardial infarction

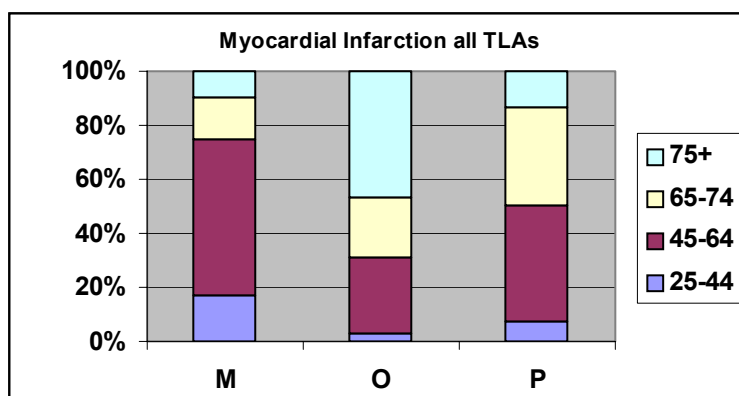
Myocardial infarction standardised discharge ratios 2002/03

SDR	Kapiti	Porirua	Wellington
Maori		1.69	1.20
Pacific		1.50	1.69
Other	1.06	0.63	0.92

Data source: Ministry of Health

Myocardial Infarction discharge rates for Maori are 20% higher in Wellington and 70% higher in Porirua than the district as a whole.

Myocardial Infarction discharges by age and ethnicity 2000/01 - 2002/03



Data source: Ministry of Health

Maori have the youngest age of onset for myocardial infarction. Over 70% of Maori admitted for myocardial infarction are under the age of 65. In comparison, half of Pacific discharges are for people under 65 and only 30% of Other discharges are aged under 65.

6.3.3 Stroke

Maori living in Porirua have a 38% higher rate of stroke discharges than the district rate. Age of onset of stroke is youngest in Maori people. 60% of stroke discharges for Maori are people under the age of 65. The figure is slightly lower for Pacific people and lower still for Other (20%).

6.3.4 Heart failure

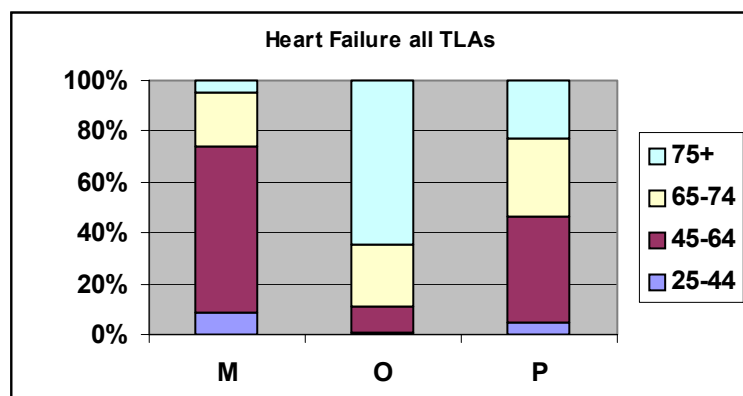
Heart failure standardised discharge ratios 2002/03

SDR	Kapiti	Porirua	Wellington
Maori		5.34	2.77
Pacific		2.53	3.57
Other	0.84	1.00	0.83

Data source: Ministry of Health

Heart failure is a significant problem for Maori. In Porirua, the Maori discharge rate is 5 times the rate of the district as a whole. In Wellington, the Maori discharge rate is over 2½ times the district rate.

Heart Failure discharges by age and ethnicity 2000/01 - 2002/03



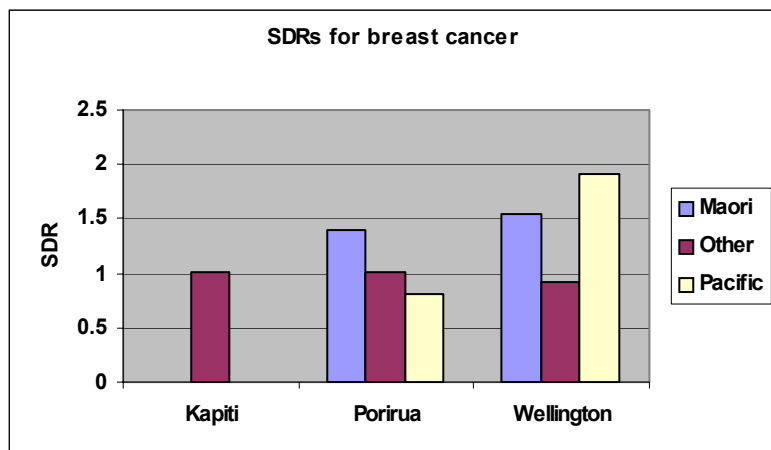
Data source: Ministry of Health

Maori have the earliest age of onset for heart failure. 70% of Maori discharges are for people under the age of 65. This is a significantly higher percentage than the proportion of under 65s in the Pacific and Other ethnic groups.

6.4 Cancer

6.4.1 Morbidity

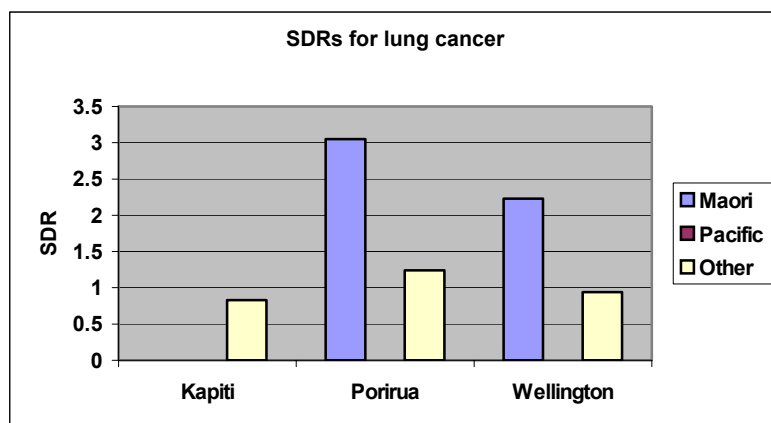
Standardised discharge ratios for breast cancer 2000/01 – 2002/03



Data source: Ministry of Health

Maori women living in Porirua have a breast cancer discharge rate 40% higher than the district rate. Maori women living in Wellington have a discharge rate that is 54% higher than the district rate.

Standardised discharge ratios for lung cancer 2000/01 – 2002/03



Data source: Ministry of Health

Maori have a consistently high rate of discharges for lung cancer. The discharge rate for Maori resident in Wellington is twice the Capital and Coast district rate and the rate for Maori living in Porirua is 3 times the district rate.

Maori have very few annual discharges for colo-rectal cancer and prostate cancer.

6.4.4 Cancer registrations

Standardised registration ratios C&C DHB 1998-2000

	Maori	Other	Pacific
Prostate cancer	0.19	1.03	0.93
Breast cancer	0.88	1.01	0.96
Colorectal cancer	0.63	1.04	0.4
Lung cancer	2.52	0.9	1.79

Data source: NZHIS New Zealand Cancer Registry

Incidence of lung cancer is high among Maori. Lung cancer registrations for Maori are 2½ times the district rate.

Maori have a particularly low registration rate for prostate cancer at only 19% of the district rate. Maori also have a low rate of colo-rectal cancer registrations.

6.4.4 Breast cancer screening⁸²

Breast cancer screening 2001/2002

	Ethnicity	Number screened	Eligible population	% screened
Porirua/Kapiti	Maori	172	516	33.3
	Pacific	78	582	13.4
	Other	2481	5571	44.5
Wellington	Maori	120	438	27.4
	Pacific	47	384	12.2
	Other	3175	10371	30.6
	Total	6073	17862	34.0

Breast cancer screening 2002/2003

	Ethnicity	Number screened	Eligible population	% screened
Porirua/Kapiti	Maori	132	539	24.5
	Pacific	85	595	14.3
	Other	1695	5697	29.8
Wellington	Maori	91	462	19.7
	Pacific	54	407	13.3
	Other	2847	10691	26.6
	Total	4904	18391	26.7

For Maori, breast screening coverage ranged between 27-33% in 2001/02 and between 20-25% in 2002/03. To achieve the goal of BreastScreen Aotearoa a coverage rate of 70% of the eligible population screened every two years is required, converting to an annual goal of 35%. Maori women in the Capital and Coast district have reduced breast screening coverage.

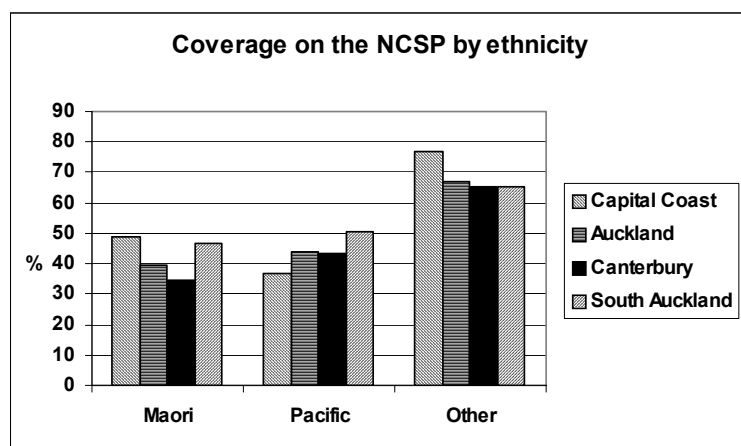
6.4.4 Cervical screening⁸³

The coverage rate is the proportion of women who have had a cervical smear recorded on the National Cervical Screening Programme (NCSP) Register in the 36 months prior to the end of the reporting period. One reason why coverage fails to meet the target is that results of smears recorded immediately after the three year period (for example at 37 months) are not counted.

⁸² Source data: C&C DHB, Review of Breast Screening in Capital and Coast District Health Board, February 2004

⁸³ Source data: C&C DHB, Review of Cervical Screening in the Capital and Coast District Health Board, November 2003 and is for women aged 20-69 years.

Women screened in the previous 36 months by ethnicity, Jul-Sep 2001



The coverage rate of Maori women in C&C DHB (48.8%) is slightly higher than in other comparable DHBs. However, this is still significantly below the target of 80% unadjusted and 85% adjusted for hysterectomy.

Data source: University of Otago

6.5 Diabetes

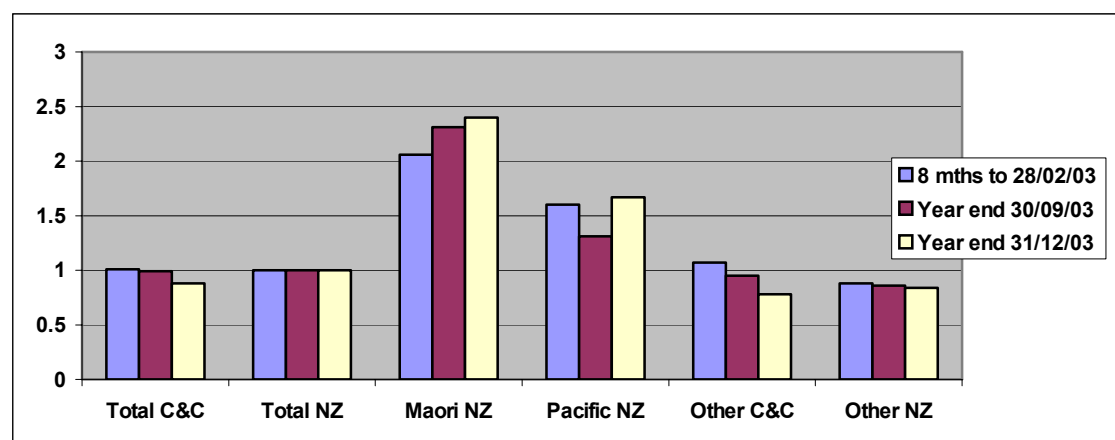
Diabetes standardised discharge ratios 2002/03

SDR	Kapiti	Porirua	Wellington
Maori		4.17	1.21
Pacific		4.95	3.16
Other	0.59	0.84	0.81

Data source: Ministry of Health

Diabetes is a significant problem for Maori, particularly so for those living in Porirua. The discharge rate for Maori living in Porirua is over 4 times the district rate. In Wellington, the Maori discharge rate for diabetes is 21% higher than the district rate.

SDRs for lower limb amputation for people with diabetes



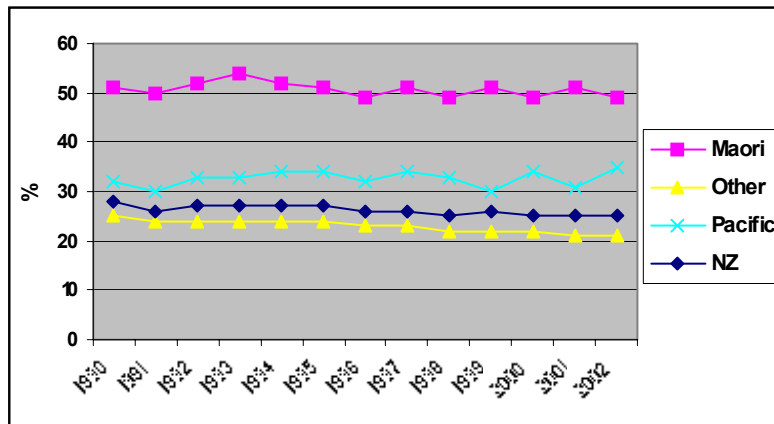
Data source: Ministry of Health

Nationally the ratios for Maori are increasing, and are higher than for Pacific and Other. Better care for people with diabetes should lower this rate, but the increasing number of people with diabetes may obscure this.

6.6 Population health

6.6.1 Smoking

Smoking prevalence by ethnicity, 15+ years, 1990-2002



Data source: ACNielsen (NZ) Ltd

Note: The classification of ethnicity information changed from 1997 onwards – ethnic specific data before and after 1997 may not be comparable.

It is difficult to tell if prevalence amongst Maori is increasing or decreasing as the percentage has fluctuated from year to year. Smoking prevalence for Maori (49%) is above the national average, and the highest of all ethnic groups.

Smoking prevalence (%) by gender and ethnicity, 14-15 years, 2002

	Maori	Pacific	Asian	European/other	Total
Daily smoking					
Male	17	11	8	9	10
Female	34	18	4	11	15
At least weekly smoking					
Male	21	14	10	12	14
Female	42	23	6	17	21

Data source: Action on Smoking and Health (ASH)

Maori girls have particularly high smoking rates. 42% of Maori girls aged 14-15 are at least weekly smokers. Only half as many Maori boys of the same age are at least weekly smokers. 34% of Maori girls aged 14-15 are daily smokers and 17% of Maori boys of the same age are daily smokers.

6.6.2 Obesity

6.6.2.1 Adults

Percentage overweight or obese by ethnicity and gender, 15+ years

	Overweight ⁸⁴		Obese ⁸⁵	
	Males	Females	Males	Females
Maori	30	33	27	28
Other	41	30	13	17
Pacific	59	29	26	47
All ethnicities	40	30	15	19

Data source: Ministry of Health

Maori males had a lower percentage of overweight people than the percentage for all ethnicities. However, Maori have a higher percentage of overweight females than the percentage for all ethnicities. Maori had a higher percentage of obesity than the percentage for all ethnicities. Maori males have a level of obesity 14% higher than males in the Other ethnic group. Maori females have a level of obesity 11% higher than females in the Other ethnic group. The proportion of people that are obese is similar for both Maori males and Maori females.

6.6.2.2 Child obesity

Percentage overweight or obese by ethnicity and gender, 5-14 years

	Overweight ⁸⁶		Obese ⁸⁷	
	Boys	Girls	Boys	Girls
Maori	20	31	16	17
Other	18	19	5	6
Pacific	34	33	26	31
All ethnicities	20	23	9	11

Data Source: Ministry of Health

Maori children have higher rates of overweight and obesity than children in the Other ethnic group.

6.6.3 Communicable diseases

Maori have a higher rate of meningococcal notifications (13 per 100,000 population) compared to the district as a whole (9 per 100,000 population).

⁸⁴ Maori and Pacific people with 26 BMI<32 and Other with 25 BMI<30

⁸⁵ Maori and Pacific people with BMI 32 and Other with BMI 30

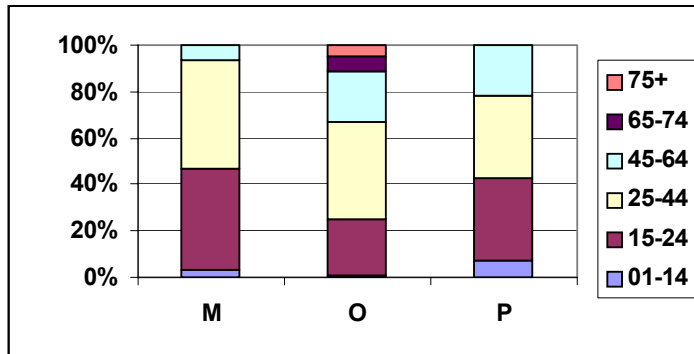
⁸⁶ Using an international cutoff as defined by Cole et. Al. 2000

⁸⁷ Using an international cutoff as defined by Cole et. Al. 2000

6.7 Suicide

Nationally, Maori have a slightly higher discharge rate for intentional self-harm than total population. The New Zealand discharge rate for all ethnicities is 135.4 per 100,000 population and the national rate for Maori is 141.4 per 100,000 population.

Suicides by age and ethnicity 2000

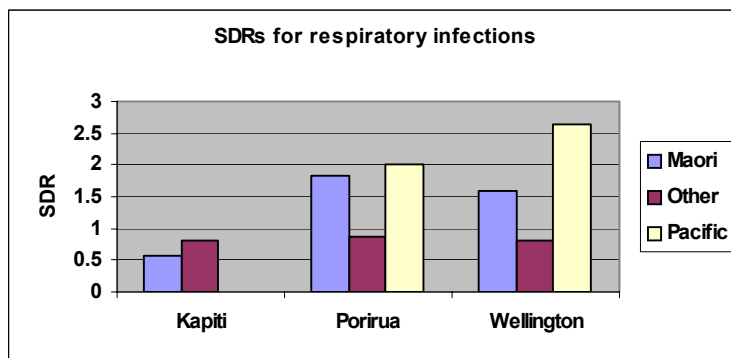


Data source: Ministry of Health

40% of Maori suicides are people under the age of 25. The figure is similar for Pacific people under the age of 25 but not as high for Other (20%). Over 90% of Maori suicides are people aged under 45.

6.8 Respiratory health

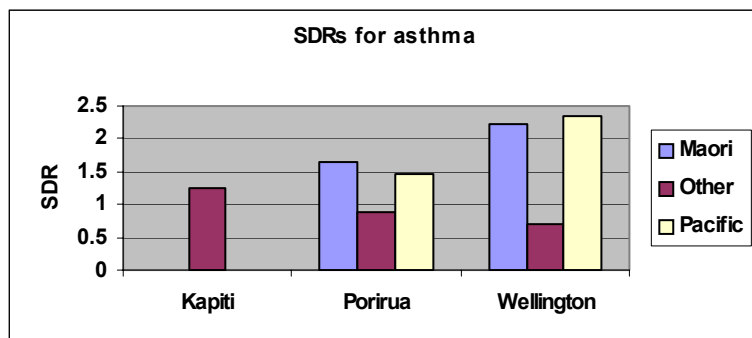
Standardised discharge ratios for respiratory infections 2002/03



Data source: Ministry of Health

Respiratory infections are a significant problem for Maori living in Porirua and Wellington. Maori living in Wellington have a rate of discharges that is 60% higher than the Capital and Coast district rate. In Porirua, the Maori discharge rate is 83% higher than the district rate.

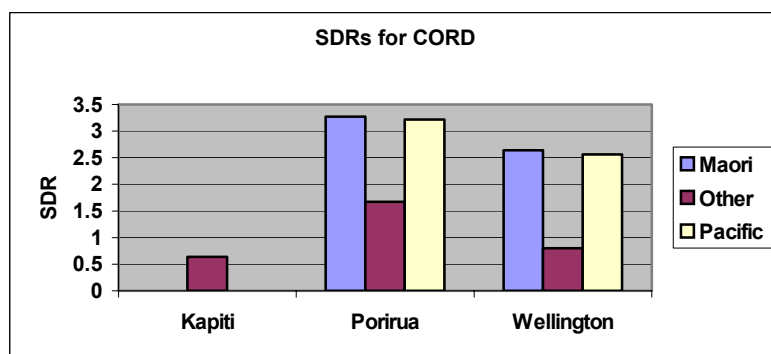
Standardised discharge ratios for asthma 2002/03



Data source: Ministry of Health

Maori living in Porirua have a 66% higher asthma discharge rate than the district population. In Wellington, Maori have twice the district discharge rate.

Standardised discharge ratios for CORD 2002/03



Data source: Ministry of Health

Maori have very high discharge rates for CORD. For Maori living in Wellington the rate is more than 2½ times the rate for the district as a whole. In Porirua, the discharge rate is more than three times the district rate.

6.9 Disability

One in five New Zealanders has a disability. The proportion is the same for Maori, however, the rates for Maori in some age groups are higher than the national rates. 33% of Maori aged 45-64 reported a disability compared with 25% of the total population in the same age group. 61% of Maori 65 and over report a disability compared with 54% of the total population over 65. The rate for Maori children is 15%, compared to the national rate for children of 11%.

Estimate Of The Capital & Coast District Disabled Population

ETHNIC GROUP	Kapiti		Porirua		Wellington		District
	Count	% of TLA	Count	% of TLA	Count	% of TLA	Count
Maori with disabilities	595	1.7%	1875	4.0%	2378	1.5%	4848
Pacific people with disabilities	63	0.2%	1549	3.3%	1056	0.6%	2669
Other ethnicities with disabilities	6236	18.1%	6040	12.8%	29323	17.9%	41599
All Ethnicities with disabilities	6894	20.0%	9464	20.0%	32757	20.0%	49116

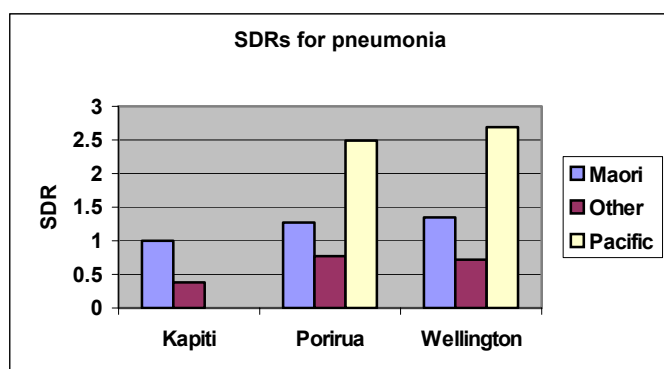
Data source: Based on data from Disability Counts 2001, Statistics New Zealand

There are higher numbers of Maori with disabilities living in Porirua.

6.10 Child health

6.10.1 Respiratory

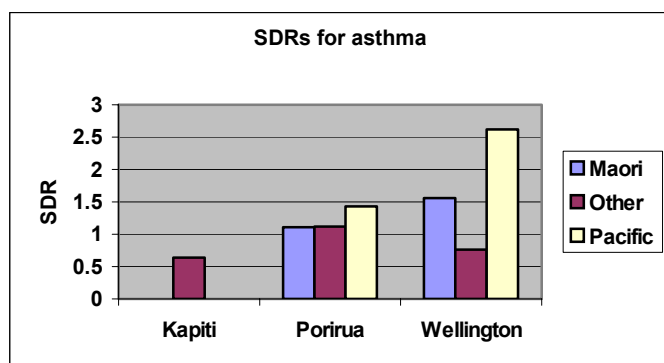
Standardised discharge ratios for pneumonia, 0-14 years, 2000/01 – 2002/03



Data source: Ministry of Health

Maori children have higher rates of pneumonia discharges than the Capital and Coast district as a whole. For Maori children, the discharge rate in Wellington is 35% higher and in Porirua is 27% higher. In comparison, Pacific children have high discharge rates of discharge and children of other ethnicities have relatively low rates.

Standardised discharge ratios for asthma, 0-14 years, 2000/01 – 2002/03



Data source: Ministry of Health

Maori children have higher rates for asthma discharges than children in the Other ethnic group, who have relatively low discharge rates. In Wellington Maori children have a 56% higher discharge rate than the district as a whole. The rate for Maori children in Porirua is 11% higher than the district rate.

6.10.2 Hearing loss

Data on hearing screening is not available for Capital and Coast, only combined data which includes Hutt Valley DHB. A national target has been set that 95% of 5 year olds will pass school entry screening.

Percentage of children failing school entry hearing screening test

District Health Board	Failure Rate %					
	Overall	Maori	Pacific Island	Euro/ Pakeha	Asian	Other
Hutt / Capital Coast (01/02)	5.7	6.7	13.7	3.6	5.8	5.6
Hutt Capital Coast (02/03)	5.2	7.0	12.3	3.2	3.9	7.9
NATIONAL TOTALS (02/03)	8.1	12.6	16.1	5.6	3.9	7.2

Data source: National Audiology Unit

The percentage of Maori children in C&C DHB/HVDHB failing school entry hearing screening is below the percentage for Maori children nationally. However, Maori children have a higher percentage failing than the overall rate.

Percentage of three year olds failing hearing tests by ethnicity, 2000/01

District Health Board	2000/01 Three Year Old Failure Rates (%)			
	Overall	Maori	Pacific Is	Other
Hutt Valley/Capital Coast	4.4	7.6	8.2	3.5
New Zealand Totals:	6.3	13.1	11.4	4.7

Data source: National Audiology Unit

Maori children in C&C DHB/HVDHB have a lower percentage failing hearing screening than the national average for Maori, however they have a higher failure rate than all other groups.

6.10.3 Oral health

Oral health status of 5 year old children in C&C DHB, 2003⁸⁸

Ethnicity	Target % Caries Free	Fluoridated		Non-Fluoridated	
		% Caries Free	Mean dmft	% Caries Free	Mean dmft
Maori	50%	41.8%	2.90	-	-
Pacific	43%	30.4%	3.78	-	-
Other	70%	68.1%	1.24	40%	1.10

⁸⁸ C&C DHB, The health of children in the Capital and Coast District Health Board, March 2004

Maori children were 8% below the target set for percentage of children caries free in 2003. Maori children have 26% fewer caries free than children in the Other ethnic group. Maori children have 12% more children caries free than Pacific children.

Maori children have a mean number of dmft (decayed, missing, filled teeth) of 2.9, which is higher than the mean for Other and lower than the mean for Pacific children. (Note that dmft is for deciduous teeth and DMFT is for permanent teeth.)

Oral health status of 12 year old children in C&C DHB, 2003⁸⁹

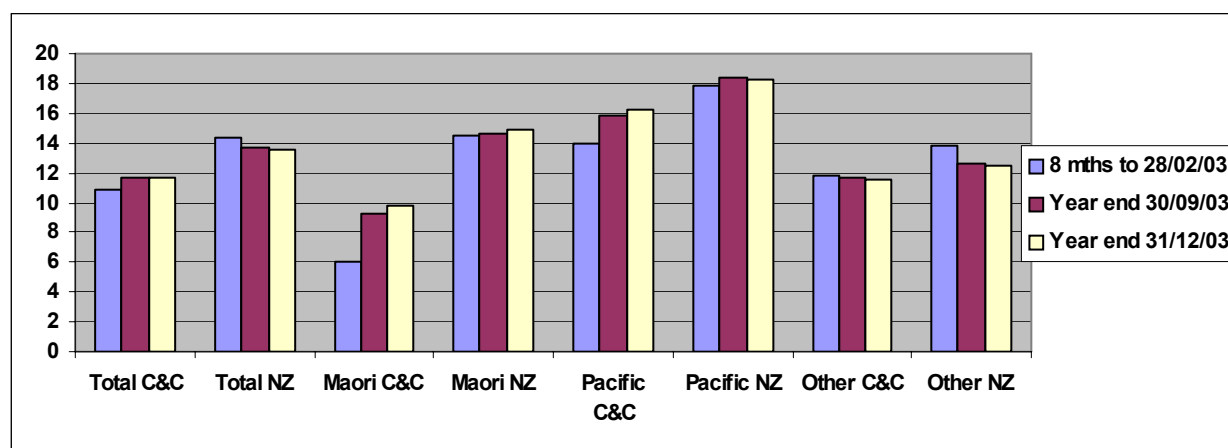
Ethnicity	Target Mean DMFT	Fluoridated		Non-Fluoridated	
		% Caries Free	Mean DMFT	% Caries Free	Mean DMFT
Maori	1.2	57%	1.15	-	-
Pacific	1.4	51%	1.12	-	-
Other	1	64%	0.78	75%	0.78

It appears that 12 year old children have better oral health than 5 year olds. Maori children have achieved their target mean DMFT. Maori children at 12 years have 7% fewer caries free than children in the Other ethnic group and 6% more children caries free than Pacific children.

6.10.4 Injuries

The majority of discharges for injury in children are due to fractures and lacerations from falls. A large number of injuries are also due to pedestrian, bike and car accidents.

Discharge rate per 1000 children for Injuries - children under 5



Data source: Ministry of Health

The discharge rate for injury in Maori children under 5 has increased, however at a 95% level of confidence it is not significantly different from the district rate. The rate for Maori children in C&C DHB is significantly lower than the rate for Maori children nationally. The rate for Maori children aged 5 to 14 is not significantly different from the district rate or the national rate for Maori.

⁸⁹ C&C DHB, The health of children in the Capital and Coast District Health Board, March 2004

6.10.4.1 Violence

Nationally, Maori children are more likely to be abused than non-Maori children. In 2003 the child abuse rate was 11.9 per 1000 children for Maori, and 5.9 per 1000 children for non-Maori.⁹⁰

Hospitalisations for injury due to violence, 0-14 years, 2000/01 – 2002/03

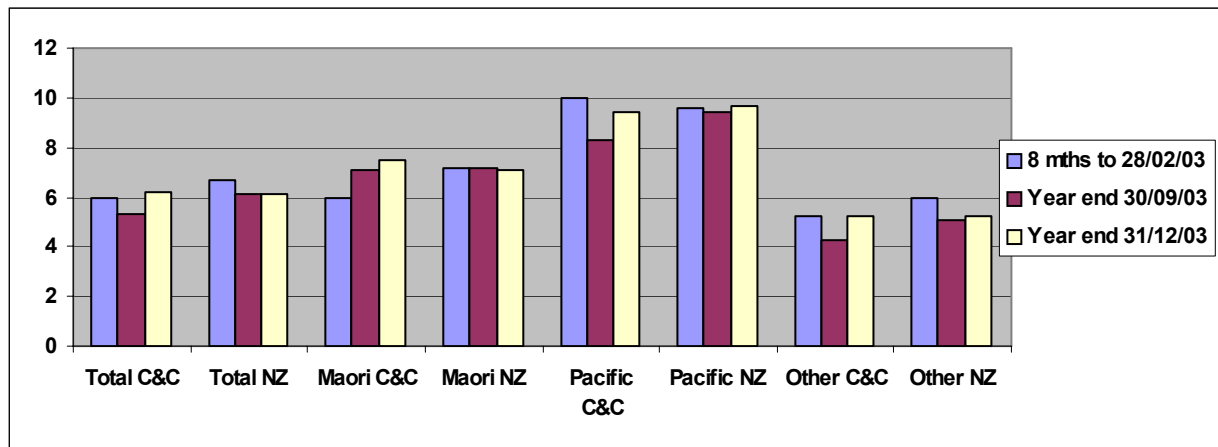
No. discharges	Kapiti	Porirua	Wellington	CCDHB
Maori	0	3	1	4
Other	6	3	10	19
Pacific	0	1	2	3
All ethnicities	6	7	13	26

Data source: Ministry of Health

In the 3 years from 2000/01 to 2002/03 there were 4 Maori children admitted to hospital for injuries due to violence. There is some variation between years, although it is difficult to identify trends as the numbers are so small.

6.10.5 Preventable hospitalisations

Preventable hospitalisations per 1000 children – children under 5



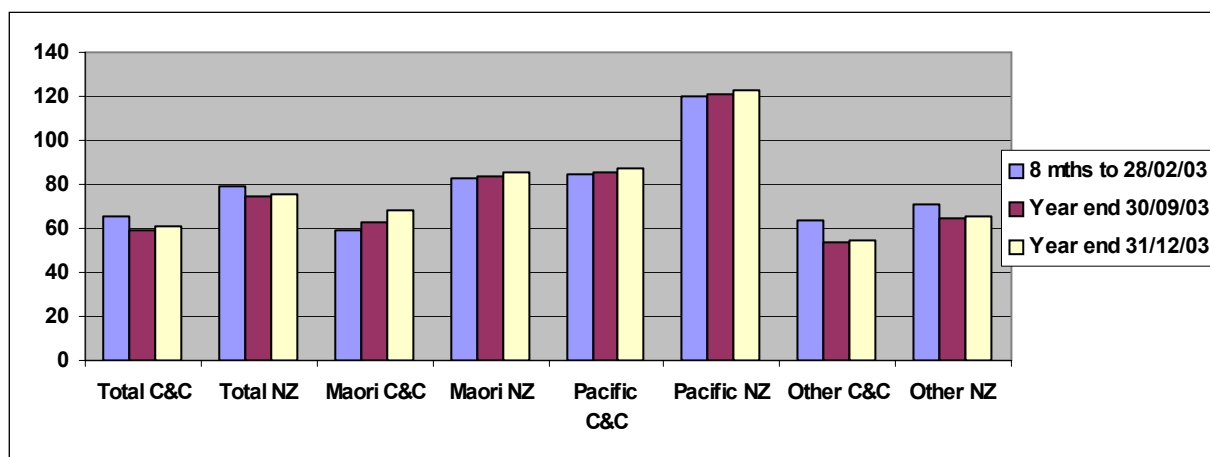
Data source: Ministry of Health

Maori children under 5 in C&C DHB have shown an increase in preventable hospitalisations. However, the rate is not significantly different from either the district rate or the national rate for Maori (95% confidence level). The rate for Maori children aged 5 –14 is not significantly different from either the district rate or the national rate for Maori.

6.10.6 Ambulatory sensitive hospitalisations

⁹⁰ Ministry of Social Development, CYRAS - Rates are for children aged under 17 years assessed as abused (physically, emotionally, sexually) following a notification to the Department of Child, Youth and Family Services.

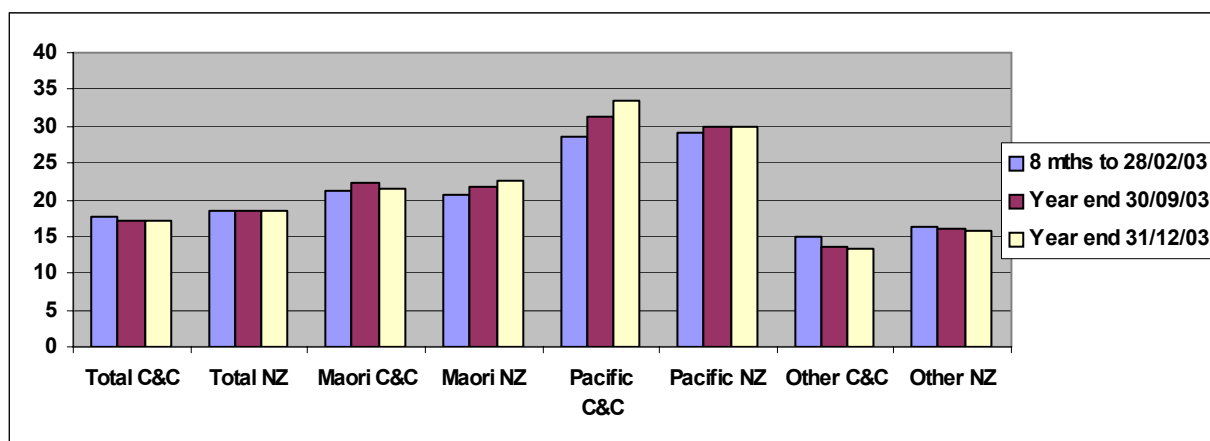
Ambulatory-sensitive hospitalisations per 1000 children – children under 5



Data source: Ministry of Health

The ambulatory sensitive hospitalisation rate for Maori children aged under 5 has increased. However, at a 95% confidence level, it is not significantly different from the district rate or the national rate for Maori.

Ambulatory sensitive hospitalisations per 1000 children – children 5 – 14 years, 2003



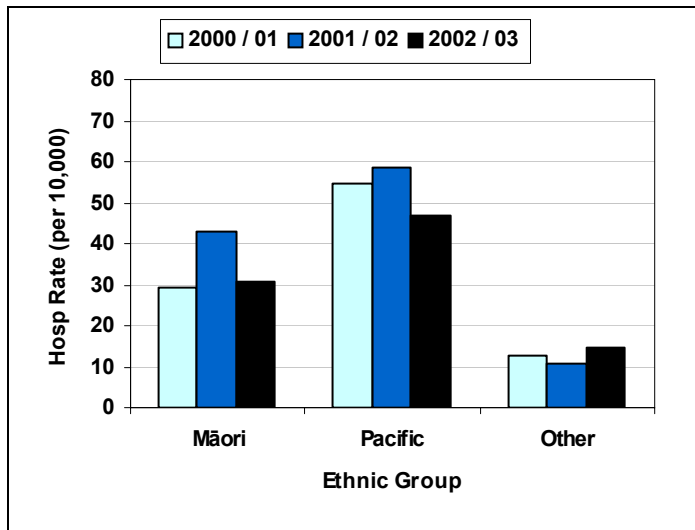
Data source: Ministry of Health

The ambulatory sensitive hospitalisation rate for Maori children aged 5 to 14 is significantly higher than the district rate at a 95% level of confidence. It is not significantly different from the national rate for Maori children aged 5 to 14.

6.10.7 Cellulitis⁹¹

⁹¹ Dr Darren Hunt, Assessing and reducing the burden of serious skin infections in children and young people in the Greater Wellington Region.

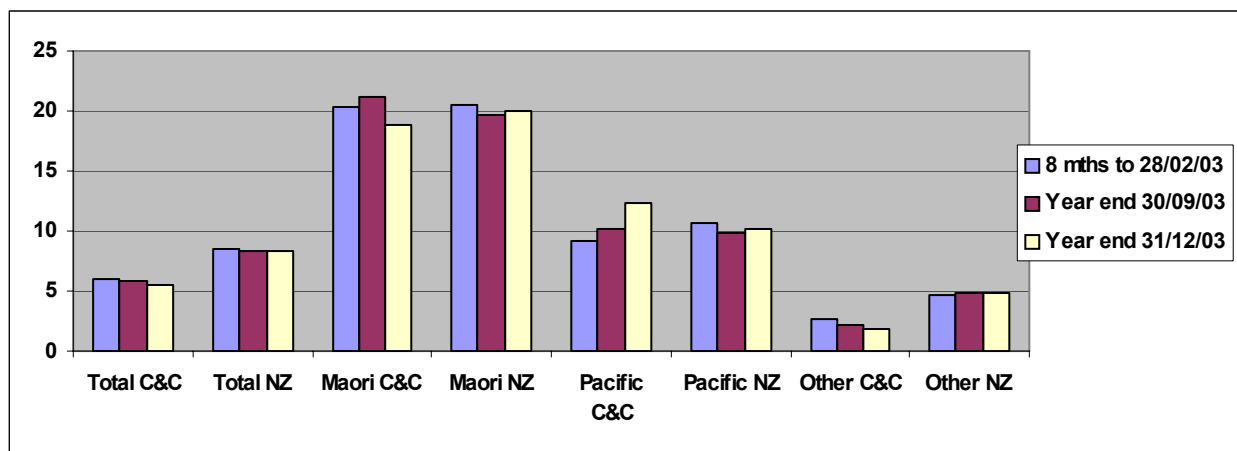
Cellulitis discharge rate by ethnicity, 1-14 years, C&C DHB 2000/01-2002/03



Maori children have higher rates of discharge for cellulitis than children in the Other ethnic group. The Maori rate is lower than the rate for Pacific children.

6.10.8 Teenage pregnancies

Discharge rate per 1000 teenagers – teenage pregnancies, 13-17 years, C&C DHB⁹²

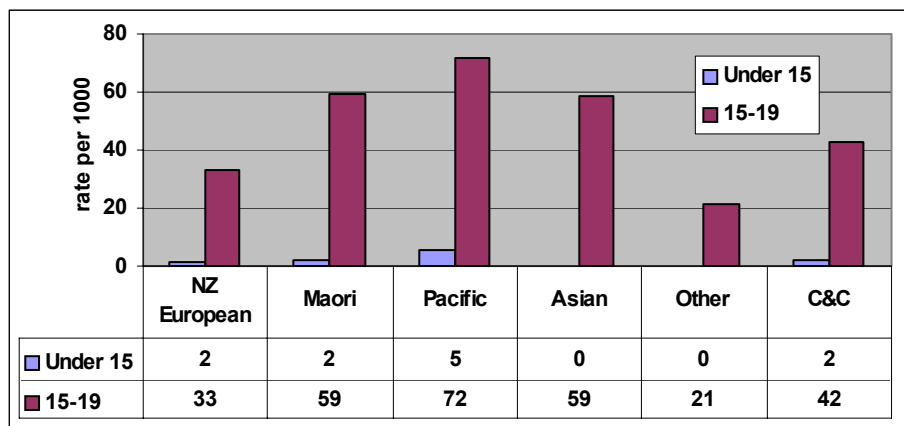


Data source: Ministry of Health

At a 95% level of confidence, the teenage pregnancy discharge rate for Maori girls is significantly higher than the district rate. The rate is not significantly different to the national rate for Maori.

⁹² 13-17 year olds giving birth in a public hospital

Termination of pregnancy rate per 1000 teenagers, 13-19 years, C&C DHB 2002



For Maori girls aged 15 to 19 years, the termination of pregnancy rate is 59 per 1000 teenagers. The standardised rate for Maori girls aged 13-19 years is 43 per 1000 teenagers compared to 31 per 1000 teenagers for all teenage girls in the district.

Chapter 7: Pacific

7.1 Overview

7.1.1 Cardiovascular

Pacific people living in Wellington have an angina discharge rate that is 35% higher than the district rate.

Pacific people have a stroke discharge rate that is 2 to 3 times the district rate.

Pacific people living in Porirua have a myocardial infarction discharge rate that is 50% higher than the district rate. Pacific people living in Wellington have a rate that is 69% higher than the district rate.

Pacific people living in Porirua have a discharge rate for heart failure that is 2½ times the district rate. Pacific people living in Wellington have a rate that is 3½ times the district rate.

7.1.2 Cancer

Pacific women living in Wellington have a breast cancer discharge rate that is 92% higher than the district rate.

Pacific women are significantly less likely than other ethnic groups to be screened for breast cancer.

Pacific people have a lung cancer registration rate that is 79% higher than the district rate.

Pacific people have a low rate of colo-rectal cancer registrations.

The cervical screening coverage rate⁹³ for Pacific women is only 48% which is significantly below the target of 80% unadjusted and 85% adjusted for hysterectomy.

7.1.3 Diabetes

Pacific people living in Porirua have a discharge rate that is nearly 5 times the district rate and Pacific people living in Wellington have a rate that is over 3 times the district rate.

Nationally Pacific people have a much higher discharge rate for vitrectomy than all other ethnic groups.

Nationally Pacific people have a higher discharge rate for lower leg amputation than the total population.

7.1.4 Population health

Smoking prevalence for Pacific people is above the national average for all ethnicities.

In 2002, 35% of Pacific adults were smokers.

The percentage of Pacific secondary students that were daily smokers is slightly above the percentage for all ethnicities.

⁹³ The coverage rate is the proportion of women who have had a cervical smear recorded on the National Cervical Screening Programme (NCSP) Register in the 36 months prior to the end of the reporting period.

Pacific males had a higher percentage of overweight adults than males in all other ethnic groups and a higher percentage of obese adults than males in the total population.

Pacific females had a higher percentage of obesity than females in all other ethnic groups.

Young Pacific people are the least active with only 52% of young people considered active. On average, they are active for 5.6 hours a week.

Pacific adults have a lower percentage active than for all adults. On average, they are active for 8.6 hours a week.

Pacific people have high rates of meningococcal disease and tuberculosis compared to the district as a whole.

7.1.5 Suicide

Nearly 80% of Pacific suicides are people aged under 45.

Over 40% of Pacific suicides are people aged under 25.

7.1.6 Respiratory health

Pacific people living in Wellington have a respiratory infection discharge rate that is 2½ times the district rate. The rate for Pacific people living in Porirua is twice the district rate.

Pacific people living in Wellington have an asthma discharge rate that is more than twice the district rate. Pacific people living in Porirua have a rate that is 45% higher than the district rate.

Pacific people have particularly high discharge rates for CORD; more than 2½ times the district rate for those living in Wellington, and more than three times the district rate for those living in Porirua.

7.1.7 Child health

7.1.7.1 Respiratory

Pacific children have 2½ times the district rate of pneumonia discharges.

Pacific children living in Wellington have an asthma discharge rate that is 2½ times the district rate.

Pacific children living in Porirua have an asthma discharge rate that is 43% higher than the district rate.

7.1.7.2 Hearing and oral

Pacific children have the highest percentage failing hearing screening of all ethnic groups.

Pacific children have the lowest percentage of caries free of all ethnic groups.

Pacific 5 year olds have a higher mean dmft⁹⁴ than all other ethnic groups and Pacific 12 year olds have a higher mean DMFT than children in the Other ethnic group.

⁹⁴ DMFT = decayed, missing, filled teeth (dmft is for deciduous teeth and DMFT is for permanent teeth)

7.1.7.3 Injuries

The discharge rate for injuries in Pacific children under five in C&C DHB has increased but is not significantly different from either the district rate or the national Pacific rate (95% confidence level).

The discharge rate for injuries in Pacific children aged five to 14 is not significantly different from the district rate or the Pacific rate nationally.

7.1.7.4 Avoidable hospitalisations

The preventable hospitalisation rate for Pacific children aged five to 14 is significantly higher than both the district rate and the national rate for Pacific (95% confidence level).

At a 95% level of confidence, the ambulatory sensitive hospitalisation rates for Pacific children in C&C DHB are significantly higher than both the district rate and the rate for Pacific nationally.

7.1.7.5 Cellulitis

Pacific children have the highest discharge rate for cellulitis.

7.1.7.6 Teenage pregnancies

The teenage pregnancy discharge rate for Pacific girls has increased and is significantly higher than the district rate.

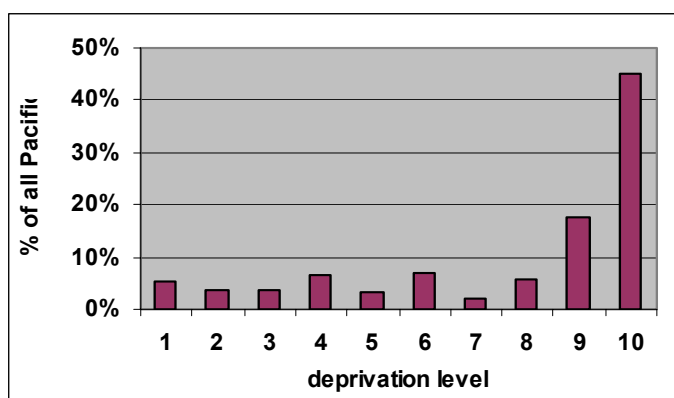
Pacific girls have the highest termination of pregnancy rate of all teenage girls in C&C DHB.

7.2 Introduction

There were 18,627 Pacific living in the Capital and Coast district at the last census count, accounting for 7.6% of the district population.

The Pacific population is relatively young in comparison to the total population. There are a large number of Pacific people living in Porirua, making up 23% of the total Porirua population. Pacific people have high levels of deprivation. The distribution of the Pacific population across the deprivation scale is shown in the graph below.

Pacific deprivation distribution, C&C DHB 2001



Data source: Statistics New Zealand

45% of the Pacific population are living in the most deprived areas (NZDep 10) and a further 17% live in NZDep 9 areas.

Pacific have lower mean incomes than European and Asian people, and have high levels of dependency on the Domestic Purposes Benefit.

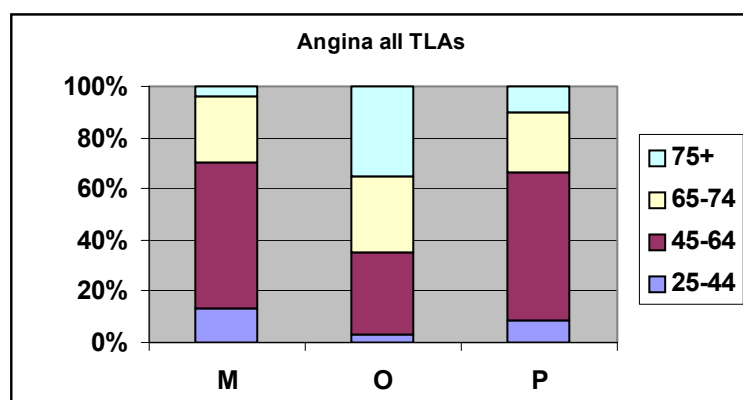
Pacific people generally have poorer health outcomes than non-Maori non-Pacific people. The following sections contain a summary of priority areas where Pacific are shown to have high need.

7.3 Cardiovascular

7.3.1 Angina

Angina discharges for Pacific people living in Wellington are 35% higher than for the district population.

Angina discharges by age and ethnicity 2000/01 - 2002/03



Data source: Ministry of Health

Just under 70% of Pacific people admitted for angina are aged under 65 compared with only 35% for Other.

7.3.2 Stroke

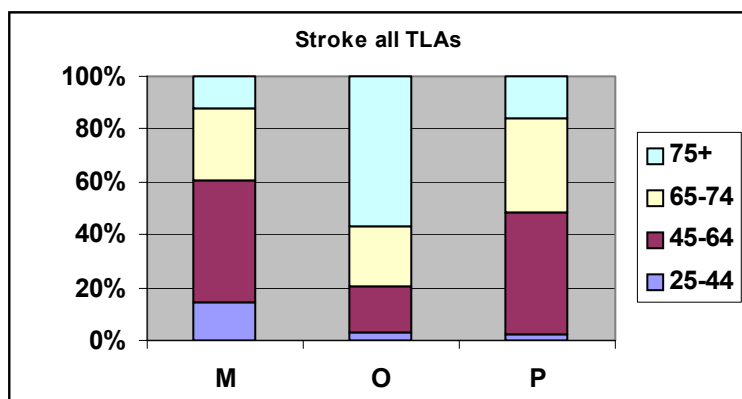
Stroke standardised discharge ratios 20002/03

SDR	Kapiti	Porirua	Wellington
Maori		1.38	0.86
Pacific		3.10	2.55
Other	0.93	1.16	0.87

Data source: Ministry of Health

Stroke is a particular problem for Pacific people, who have between 2½ to 3 times the district rate of discharges depending on where they live. The discharge rate for Pacific people is significantly higher than for Maori or Other.

Stroke discharges by age and ethnicity 2000/01 - 2002/03



Data source: Ministry of Health

Stroke affects Pacific people at a younger age than people in the Other ethnic group. Around half of Pacific discharges for stroke are people aged under 65. Maori have about 10% more discharges in this age group, however in the Other ethnic group only 20% of discharges are for people under 65.

7.3.3 Myocardial infarction

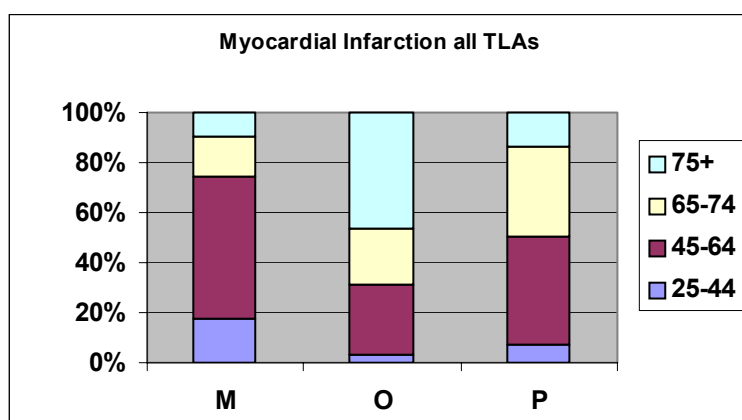
Myocardial infarction standardised discharge ratios 2002/03

SDR	Kapiti	Porirua	Wellington
Maori		1.69	1.20
Pacific		1.50	1.69
Other	1.06	0.63	0.92

Data source: Ministry of Health

The myocardial infarction discharge rate for Pacific people living in Wellington is 69% higher than the district rate. For Pacific people living in Porirua the rate is 50% higher than the district rate.

Myocardial infarction discharges by age and ethnicity 2000/01 - 2002/03



Data source: Ministry of Health

Pacific people have an earlier age of onset of myocardial infarction than the Other ethnic group. Half of Pacific discharges are for people under 65, although the figure is slightly

higher in Porirua. Maori have a larger proportion of discharges in this age group with over 70% of Maori discharges for people under 65. In the Other ethnic group only 30% of discharges are for people aged under 65.

7.3.4 Heart Failure

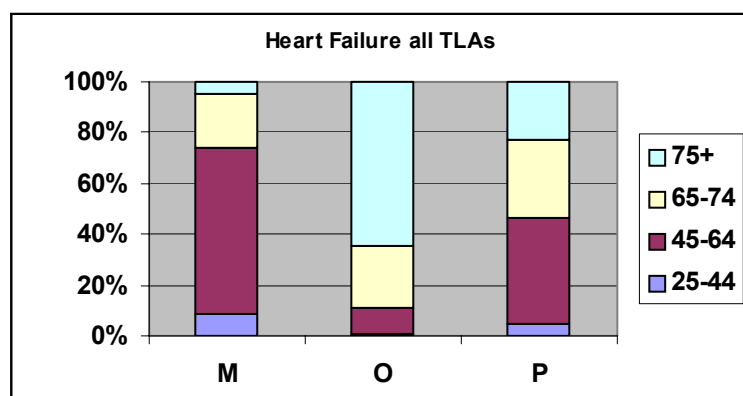
Heart failure standardised discharge ratios 2002/03

SDR	Kapiti	Porirua	Wellington
Maori		5.34	2.77
Pacific		2.53	3.57
Other	0.84	1.00	0.83

Data source: Ministry of Health

Heart failure is a significant problem for Pacific people with 2½ times the district rate in Porirua and 3½ times the district rate in Wellington.

Heart Failure discharges by age and ethnicity 2000/01 - 2002/03



Data source: Ministry of Health

40% of Pacific discharges for heart failure are for people aged under 65. Maori have a higher percentage in this age group with 70% of discharges for people under 65. In comparison, in the Other ethnic group only 10% of heart failure discharges are people aged under 65. For the Other ethnic group, heart failure is a condition that mainly affects people over 75. Only 20% of Pacific discharges are people aged over 75.

7.4 Cancer

7.4.1 Morbidity

Standardised discharge ratios for breast cancer 2000/01 – 2002/03

SDR	Kapiti	Porirua	Wellington
Maori		1.40	1.54
Pacific		0.80	1.92
Other	1.01	1.02	0.92

Data source: Ministry of Health

Pacific women in Wellington have a 92% higher discharge rate for breast cancer than the district rate.

There are very few yearly discharges of Pacific people for prostate, colo-rectal and lung cancers, so ratios have not been calculated.

7.4.2 Cancer registrations

Ethnic variation in cancer registration rates C&C DHB 1998-2000

	Maori	Other	Pacific
Prostate cancer	0.19	1.03	0.93
Breast cancer	0.88	1.01	0.96
Colorectal cancer	0.63	1.04	0.4
Lung cancer	2.52	0.9	1.79

Data source: NZHIS New Zealand Cancer Registry

Lung cancer registrations for Pacific people are 79% higher than for the district as a whole.

Pacific people have a low rate of colo-rectal cancer registrations with only 40% of the district rate.

7.4.3 Breast cancer screening⁹⁵

The overall goal of BreastScreen Aotearoa is to reduce the incidence of breast cancer by 30%. To achieve this a coverage rate of 70% of the eligible population screened every two years is required, converting to an annual goal of 35%.

Breast screening 2001/2002

	Ethnicity	Number screened	Eligible population	% screened
Porirua/Kapiti	Maori	172	516	33.3
	Pacific	78	582	13.4
	Other	2481	5571	44.5
Wellington	Maori	120	438	27.4
	Pacific	47	384	12.2
	Other	3175	10371	30.6
	Total	6073	17862	34.0

⁹⁵ Data source: C&C DHB, Review of Breast Screening in Capital and Coast District Health Board, February 2004

Breast screening 2002/2003

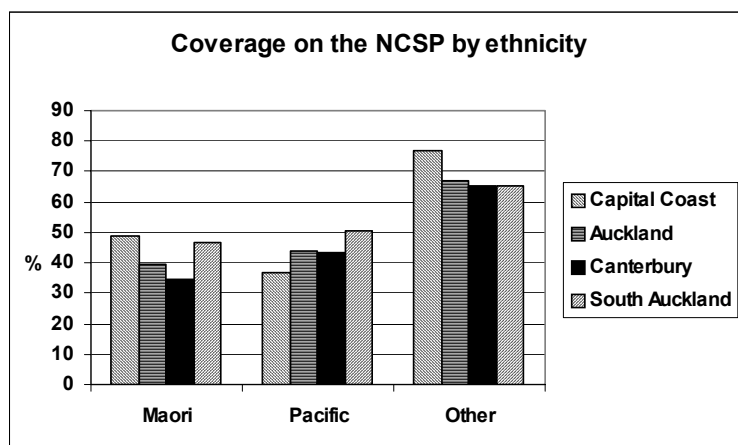
	Ethnicity	Number screened	Eligible population	% screened
Porirua/Kapiti	Maori	132	539	24.5
	Pacific	85	595	14.3
	Other	1695	5697	29.8
Wellington	Maori	91	462	19.7
	Pacific	54	407	13.3
	Other	2847	10691	26.6
	Total	4904	18391	26.7

In the two financial years 2001/02 and 2002/03 the screening coverage for Pacific women ranged between 12 and 14%. Pacific women have the lowest breast screening rates.

7.4.4 Cervical screening⁹⁶

The coverage rate is the proportion of women who have had a cervical smear recorded on the National Cervical Screening Programme (NCSP) Register in the 36 months prior to the end of the reporting period. One reason why coverage fails to meet the target is that results of smears recorded immediately after the three year period (for example at 37 months) are not counted.

Women screened in the previous 36 months by ethnicity, Jul-Sep 2001



The coverage rate of Pacific women in C&C DHB (36.8%) is lower than in other comparable DHBs. However, the rate is significantly lower than the target of 80% unadjusted and 85% adjusted for hysterectomy.

Data source: University of Otago

⁹⁶ Data source: C&C DHB, Review of Cervical Screening in the Capital and Coast District Health Board, November 2003 and is for women aged 20-69 years.

7.5 Diabetes

Standardised discharge ratios for diabetes 2002/03

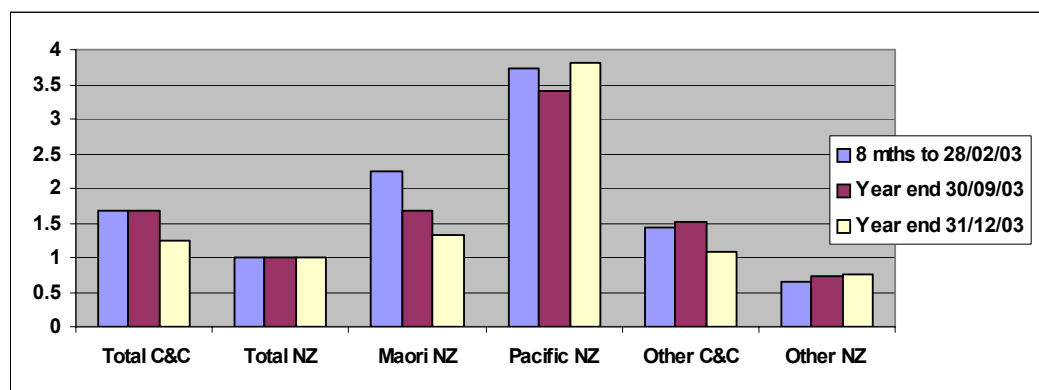
SDR	Kapiti	Porirua	Wellington
Maori		4.17	1.21
Pacific		4.95	3.16
Other	0.59	0.84	0.81

Data source: Ministry of Health

Pacific people have the highest diabetes discharge rates in the district. Pacific people in Porirua have nearly 5 times the district rate of discharges and those living in Wellington have over 3 times the district rate.

7.5.1 Diabetes indicators

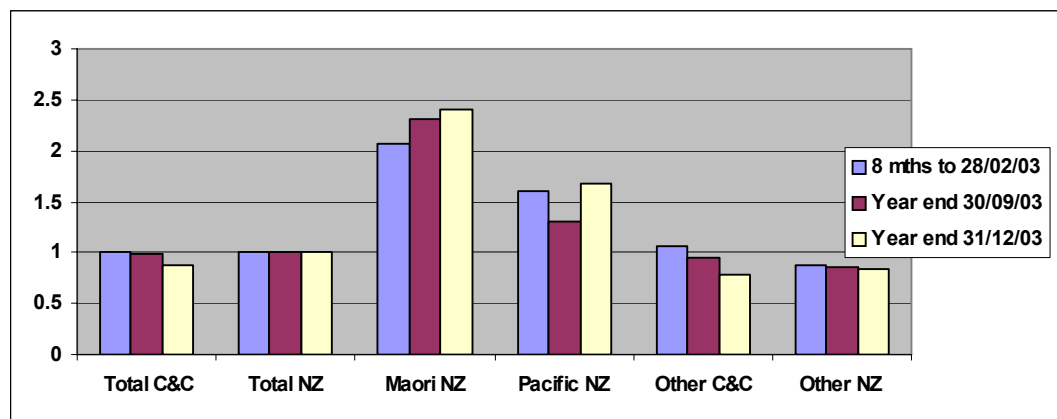
SDRs for Vitrectomy for people with diabetes



Data source: Ministry of Health

Nationally, Pacific people have a much higher discharge rate for vitrectomy than all other ethnic groups. A discharge ratio for Pacific people living in C&C DHB has not been calculated because of the small number of discharges.

SDRs for lower limb amputation for people with diabetes



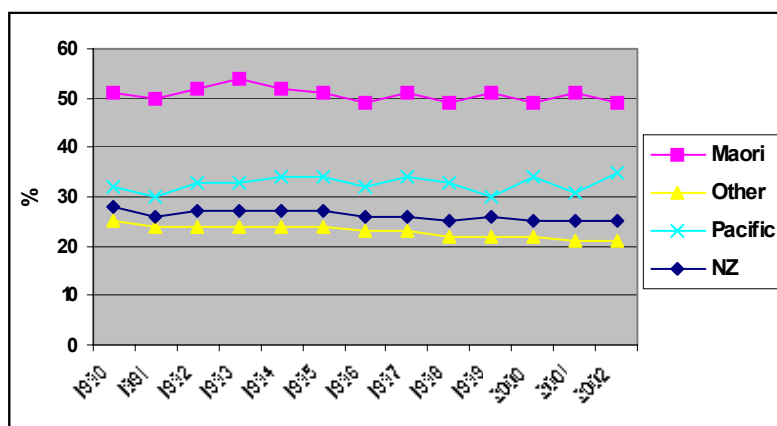
Data source: Ministry of Health

Nationally, the discharge ratio for Pacific people is higher than for the Other ethnic group and for the total population. A discharge ratio for Pacific people living in C&C DHB has not been calculated due to the small number of discharges.

7.6 Population health

7.6.1 Smoking

Prevalence of cigarette smoking by ethnicity, 15+ years, 1990-2002



Data source: ACNielsen (NZ) Ltd

Note: The classification of ethnicity information changed from 1997 onwards – ethnic specific data before and after 1997 may not be comparable.

It is difficult to determine if prevalence amongst Pacific people is increasing or decreasing as the percentage has fluctuated from year to year. Smoking prevalence for Pacific people is above the national average for all ethnicities. In 2002 35% of Pacific adults were smokers.

Smoking prevalence (%) by gender and ethnicity, 14-15 years, 2002

	Maori	Pacific	Asian	European/other	Total
Daily smoking					
Male	17	11	8	9	10
Female	34	18	4	11	15
At least weekly smoking					
Male	21	14	10	12	14
Female	42	23	6	17	21

Data source: Action on Smoking and Health (ASH)

The percentage of Pacific secondary school students that were daily smokers is slightly above the percentage for all ethnicities. Prevalence of at least weekly smoking in Pacific students is similar to that for all ethnicities. For Pacific students, 11% of males and 18% of females were daily smokers. 14% of males and 23% of females were at least weekly smokers.

7.6.2 Nutrition & obesity

7.6.2.1 Adults

The information below is based on results of the 1997 New Zealand National Nutrition Survey.

Percentage overweight or obese by ethnicity and gender, 15+ years

	Overweight ⁹⁷		Obese ⁹⁸	
	Males	Females	Males	Females
Maori	30	33	27	28
Other	41	30	13	17
Pacific	59	29	26	47
All ethnicities	40	30	15	19

Data source: Ministry of Health

Pacific males had a higher percentage of overweight people than the percentage for males of all ethnicities. Pacific females had a higher percentage of obesity than females in all other ethnic groups. Nearly twice as many Pacific females than males are considered obese. Pacific males had a percentage of obesity similar to Maori, but higher than the percentage for all ethnicities.

7.6.2.2 Child obesity

The information below is based on results of the 2002 Child National Nutrition Survey.

Percentage overweight or obese by ethnicity and gender, 5-14 years

	Overweight ⁹⁹		Obese ¹⁰⁰	
	Boys	Girls	Boys	Girls
Maori	20	31	16	17
Other	18	19	5	6
Pacific	34	33	26	31
All ethnicities	20	23	9	11

Data source: Ministry of Health

Pacific children have the highest rates of overweight and obesity. Pacific boys and girls have a similar proportion overweight, but there is a higher percentage of Pacific girls that are obese.

7.6.3 Physical activity

The information below is based on combined results of SPARC's 1997, 1999 and 2000 Sport and Physical Activity Surveys. In the tables below, "active" is defined as having taken part in

⁹⁷ Maori and Pacific people with BMI < 26 and Other with BMI < 25

⁹⁸ Maori and Pacific people with BMI < 32 and Other with BMI < 30

⁹⁹ Using an international cutoff as defined by Cole et. Al. 2000

¹⁰⁰ Using an international cutoff as defined by Cole et. Al. 2000

at least 2.5 hours of sport/leisure-time physical activity in the 7 days before being interviewed.

Levels of physical activity among young people in New Zealand

	Girls	Boys	Maori	Pacific	European	Other	All young people
% active	64	73	71	52	70	59	68
Hours active per week	5.8	7.3	7.7	5.6	6.5	5.7	6.6

Data source: Sport and Recreation New Zealand

Young Pacific people are the least active with only 52% of young people considered active. They also spend the least amount of time being active. On average, young Pacific people are active for 5.6 hours a week.

Levels of physical activity among adults in New Zealand

	Women	Men	Maori	Pacific	European	Other	All adults
% active	66	69	67	63	69	54	68
Hours active per week	8.4	10.3	10.9	8.6	9.3	7.2	9.3

Data source: Sport and Recreation New Zealand

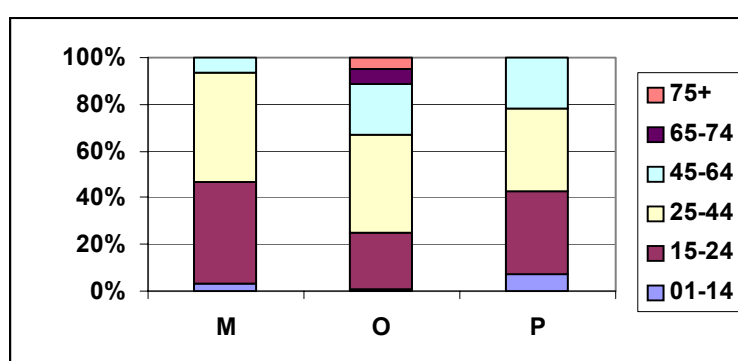
Pacific adults have a lower percentage active than that for all adults, and lower than all ethnic groups except Other. The same pattern is seen for hours active per week.

7.6.4 Communicable diseases

Pacific people have a high notification rate of meningococcal disease (35 per 100,000 population) compared to the rate for the district as a whole (9 per 100,000 population). Pacific people also have a high notification rate of tuberculosis (22 per 100,000 population) compared to the rate for the district as a whole (14 per 100,000 population) and the whole country (10 per 100,000 population).

7.7 Suicide

Suicides by age and ethnicity 2000

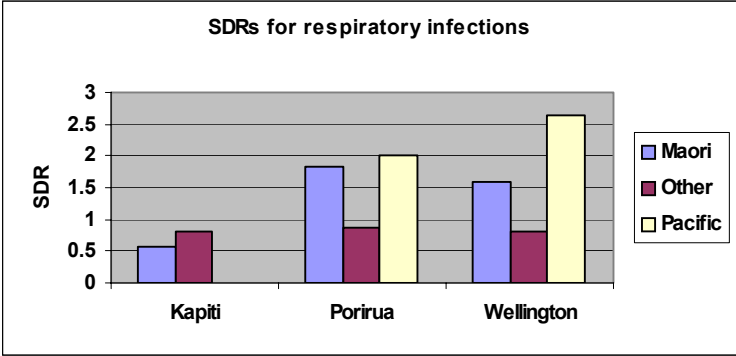


Data source: Ministry of Health

40% of Pacific suicides are by people aged under 25. In comparison, just over 20% of suicides in the Other ethnic group are people aged under 25.

7.8 Respiratory health

Standardised discharge ratios for respiratory infections 2002/03

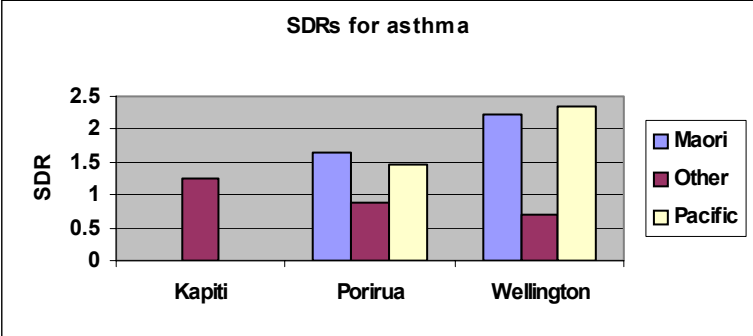


Pacific people living in Wellington have more than 2½ times the district rate of discharges for respiratory infections. Pacific people living in Porirua have twice the district rate of discharges.

Data source: Ministry of Health

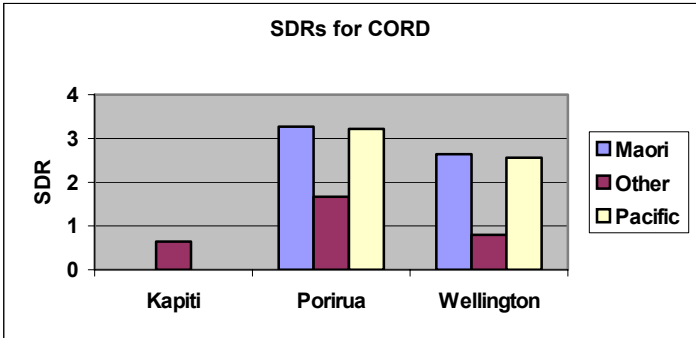
Standardised discharge ratios for asthma 2002/03

Pacific people living in Wellington have more than twice the district rate of asthma discharges. In Porirua the Pacific rate is 45% higher than the rate of the district as a whole.



Data source: Ministry of Health

Standardised discharge ratios for CORD 2002/03



Pacific people have particularly high discharge rates for CORD. For Pacific people living in Wellington the rate is more than 2½ times the rate of the district as a whole. For Pacific people living in Porirua the rate is more than three times the district rate.

Data source: Ministry of Health

7.9 Disability

One in seven Pacific people have a disability, compared with the national rate of one in five. Of the estimated disabled Pacific population in C&C DHB, approximately 17.5% are thought to have an unmet need. This is higher than for the total district population, where it is estimated that 15% of disabled people have unmet need.

Estimate of unmet need for at least one type of health service for C&C DHB disabled population (Adapted from Disability Counts 2001)

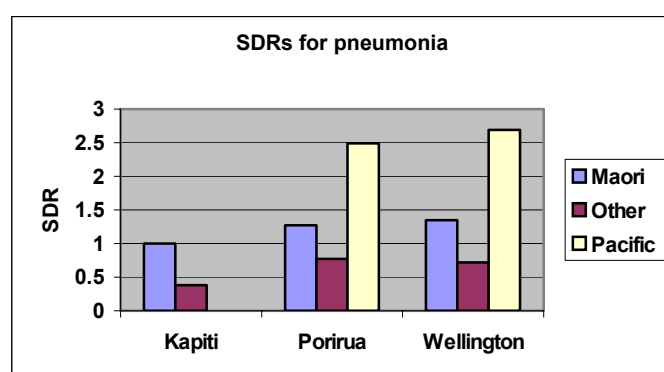
Ethnic group	Est. disabled Pop	Est. people with unmet need
Maori	4848	1115 (23%)
Pacific	2669	467 (17.5%)
Other	41599	5782 (13.9%)
Total	49116	7364 (15%)

Data source: Based on data from Disability Counts 2001, Statistics New Zealand

7.10 Child health

7.10.1 Respiratory

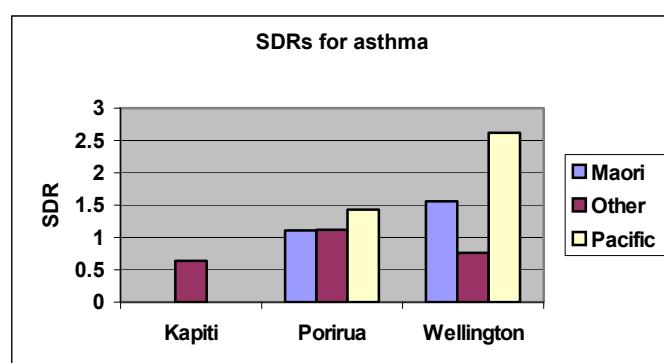
SDRs for pneumonia, 0-14 years, 2000/01 – 2002/03



Pneumonia is a significant problem for Pacific children who have 2½ times the district rate of discharges. Maori children also have higher rates than the Capital and Coast district as a whole, but the discharge ratios are only half of the Pacific ratios.

Data source: Ministry of Health

SDRs for asthma, 0-14 years, 2000/01 – 2002/03



Pacific children have high rates of asthma discharges. In Wellington, Pacific children have more than 2½ times the district rate of discharges. For Pacific children in Porirua the discharge rate is 43% higher than the district as a whole.

Data source: Ministry of Health

7.10.2 Hearing loss

Data on hearing screening is not available for Capital and Coast, only combined data which includes Hutt Valley DHB. A national target has been set that 95% of 5 year olds will pass school entry screening.

Percentage of children failing school entry hearing screening test

District Health Board	Failure Rate %					
	Overall	Maori	Pacific Island	Euro/ Pakeha	Asian	Other
Hutt / Capital Coast (01/02)	5.7	6.7	13.7	3.6	5.8	5.6
Hutt Capital Coast (02/03)	5.2	7.0	12.3	3.2	3.9	7.9
NATIONAL TOTALS (02/03)	8.1	12.6	16.1	5.6	3.9	7.2

Data source: National Audiology Unit

The percentage of Pacific children in C&C DHB/HVDHB failing school entry hearing screening is below the percentage for Pacific children nationally. However, Pacific children have a higher percentage failing than all other groups.

Percentage of three year olds failing hearing tests by ethnicity, 2000/01

District Health Board	2000/01 Three Year Old Failure Rates (%)			
	Overall	Maori	Pacific Is	Other
Hutt Valley/Capital Coast	4.4	7.6	8.2	3.5
New Zealand Totals:	6.3	13.1	11.4	4.7

Data source: National Audiology Unit

The failure rate for Pacific children is lower than the national average for Pacific children. However, Pacific children have a high percentage of children failing compared to children in the Other ethnic group.

7.10.3 Oral health

Oral health status of 5 year old children in C&C DHB, 2003¹⁰¹

Ethnicity	Target % Caries Free	Fluoridated		Non-Fluoridated	
		% Caries Free	Mean dmft	% Caries Free	Mean dmft
Maori	50%	41.8%	2.90	-	-
Pacific	43%	30.4%	3.78	-	-
Other	70%	68.1%	1.24	40%	1.10

Pacific people have a significantly lower percentage of 5 year olds caries free than the Other ethnic group, and 12% less 5 year olds caries free than Maori children. Pacific children are 13% below the target for percentage caries free. Pacific 5 year olds also have the highest mean dmft (decayed, missing, filled teeth). (Note that dmft is for deciduous teeth and DMFT is for permanent teeth.)

¹⁰¹ C&C DHB, The health of children in the Capital and Coast District Health Board, March 2004

Oral health status of 12 year old children in C&C DHB, 2003¹⁰²

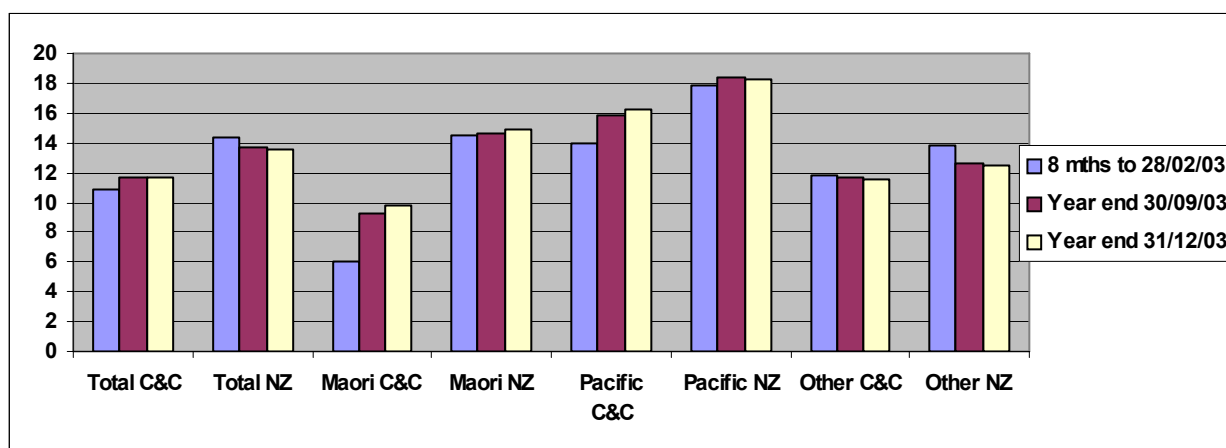
Ethnicity	Target Mean DMFT	Fluoridated		Non-Fluoridated	
		% Caries Free	Mean DMFT	%Caries Free	Mean DMFT
Maori	1.2	57%	1.15	-	-
Pacific	1.4	51%	1.12	-	-
Other	1	64%	0.78	75%	0.78

All ethnicities have bettered the target for mean DMFT. Pacific children have an improved percentage caries free, however are still below children of other ethnicities.

7.10.4 Injuries

The majority of discharges for injury in children are due to fractures and lacerations from falls. A large number of injuries are also due to pedestrian, bike and car accidents.

Discharge rate per 1000 children for Injuries - children under 5



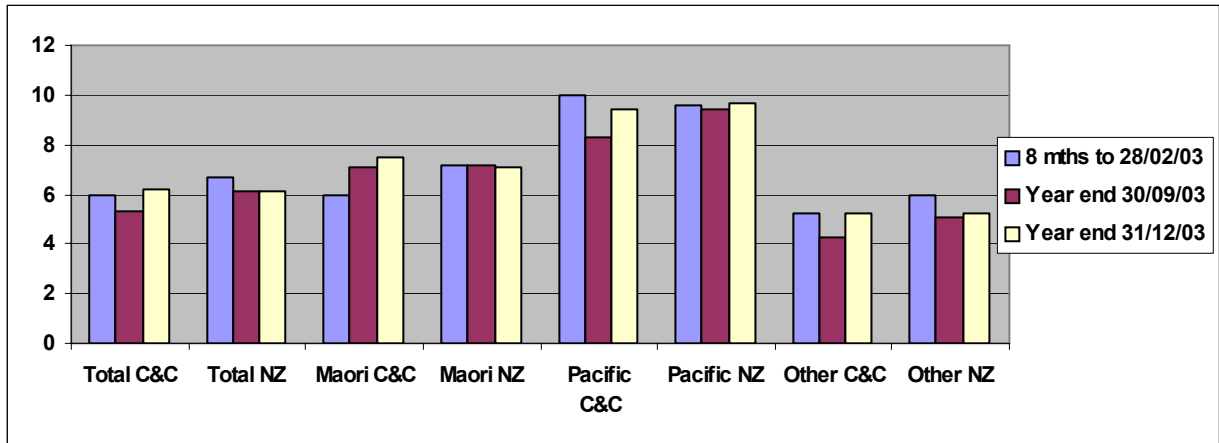
Data source: Ministry of Health

The discharge rate for injuries in Pacific children aged under 5 has increased. However, at a 95% confidence level, it is not significantly different from either the district rate or the rate for Pacific nationally. The rate for Pacific children aged 5 to 14 are not significantly different to the district rate or the national rate for Pacific.

7.10.5 Preventable hospitalisation

¹⁰² C&C DHB, The health of children in the Capital and Coast District Health Board, March 2004

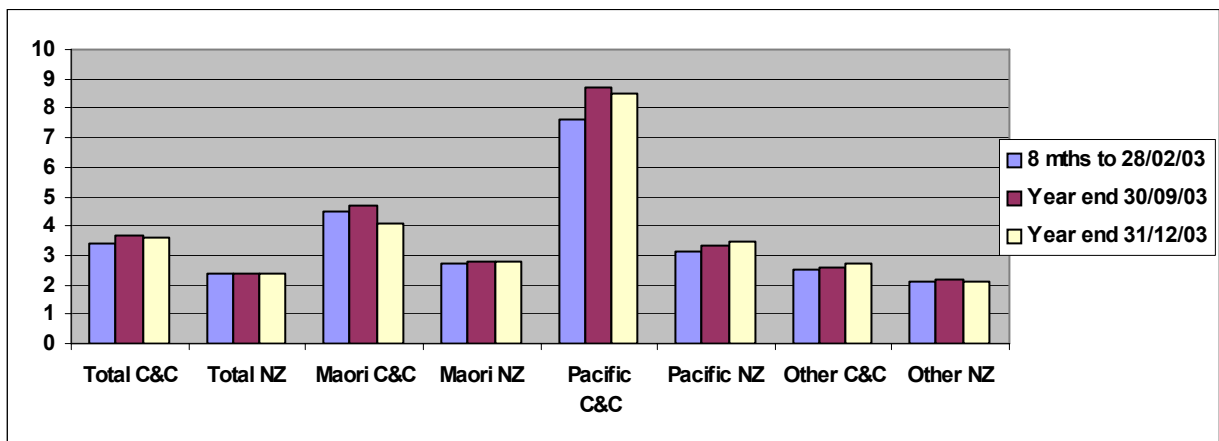
Preventable hospitalisations per 1000 children – children under 5



Data source: Ministry of Health

Pacific children aged under 5 in C&C DHB have a higher preventable hospitalisation rate than the district rate. However, at a 95% level of confidence, the rate is not significantly different from the district rate or the national rate for Pacific.

Preventable hospitalisation per 1000 children – children 5 – 14 years

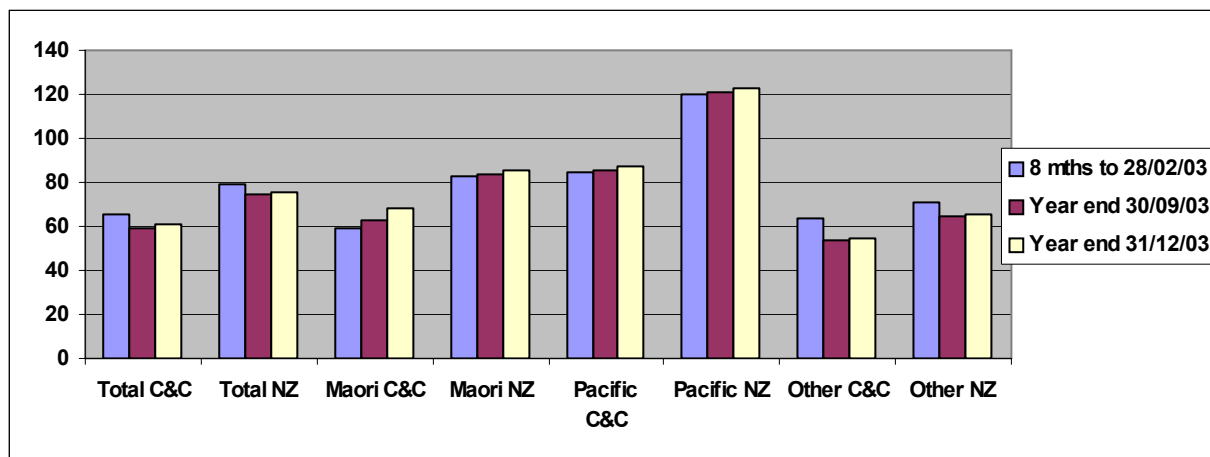


Data source: Ministry of Health

Pacific children aged 5 to 14 have a preventable hospitalisation rate that is significantly higher than the district rate (95% confidence level). The Capital and Coast rate for Pacific is also significantly higher than the national rate for Pacific.

7.10.6 Ambulatory sensitive hospitalisations

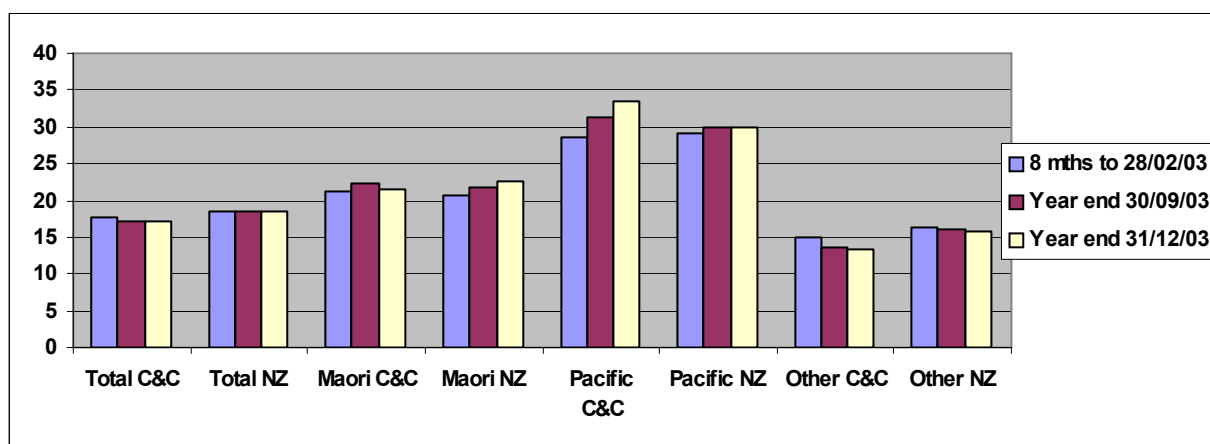
Ambulatory sensitive hospitalisations per 1000 children – children under 5



Data source: Ministry of Health

At a 95% level of confidence, the ambulatory sensitive hospitalisation rate for Pacific children aged under five is significantly higher than the district rate. The rate for Pacific in C&C DHB has increased, however it is significantly lower than the rate for Pacific nationally.

Ambulatory sensitive hospitalisations per 1000 children – children 5 – 14 years

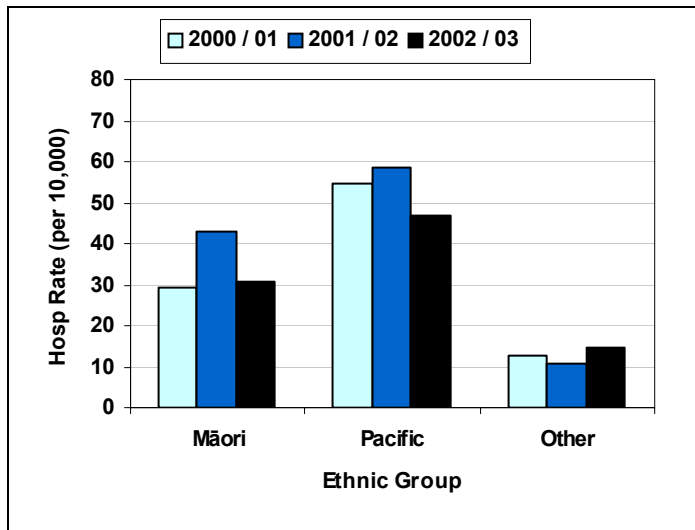


Data source: Ministry of Health

The ambulatory sensitive hospitalisation rate for Pacific children aged 5 to 14 has increased. At a 95% level of confidence the Pacific rate is significantly higher than the district rate. The Pacific rate in C&C DHB is not significantly higher than the national Pacific rate.

7.10.7 Cellulitis

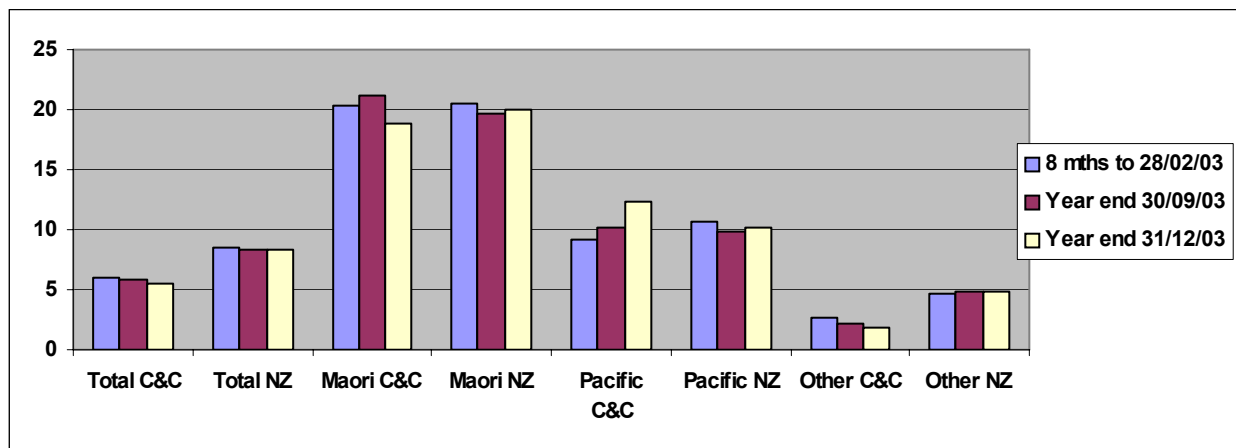
Cellulitis discharge rates, 1-14 years, C&C DHB 2000/01 – 2002/03



Pacific children have the highest discharge rates for cellulitis. The rate for Pacific children is higher than for Māori children, and significantly higher than for Other children.

7.10.8 Teenage pregnancies

Discharge rate per 1000 teenagers – teenage pregnancies, 13-17 years¹⁰³



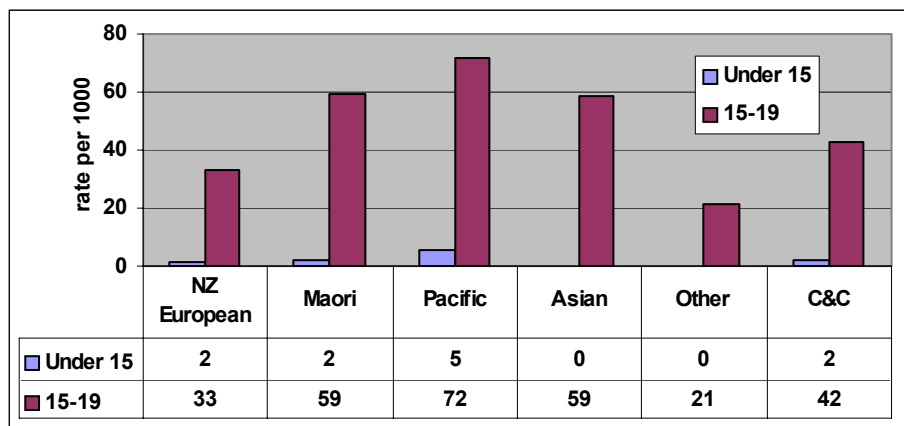
Data source: Ministry of Health

The teenage pregnancy discharge rate for Pacific girls in C&C DHB has increased and is now above the national rate for Pacific. However, at a 95% confidence level it is not significantly different to the national rate.

The teenage pregnancy discharge rate for Pacific girls is significantly higher than the district rate.

¹⁰³ 13-17 year olds giving birth in a public hospital

Termination of pregnancy rate per 1000 teenagers, 13-19 years, C&C DHB 2002



Pacific girls have the highest termination of pregnancy rate of all teenage girls in C&C DHB. For Pacific girls aged 15 to 19 years the rate is 72 terminations per 1000 teenagers. The standardised rate for Pacific girls aged 13-19 years is 54 per 1000 teenagers compared to 31 per 1000 teenagers for all teenage girls in the district.

Chapter 8: Gender issues

8.1 Introduction

Being male or female has a significant impact on health status, as well as access to and utilisation of services.¹⁰⁴ Gender inequalities are related to both biological factors and "*the roles that define men and women according to the positions they occupy in society, the different roles they perform and the variety of social and cultural expectations and constraints placed upon them.*"¹⁰⁵

In some areas there are marked contrasts between genders in terms of mortality and morbidity trends. Women generally have poorer self-reported health status than men, particularly in areas relating to mental health and wellbeing.¹⁰⁶ Men have lower PHO enrolment than women (87% compared to 91%), and lower utilisation of primary care services. This chapter summarises those areas indicating that the health of one gender may vary significantly from the other. The major points are:

Females have higher life expectancy and independent life expectancy than males.

Females have higher morbidity rates over their lifetime due to reproductive processes.

Males have high rates of discharge for injury from 1 – 74 years.

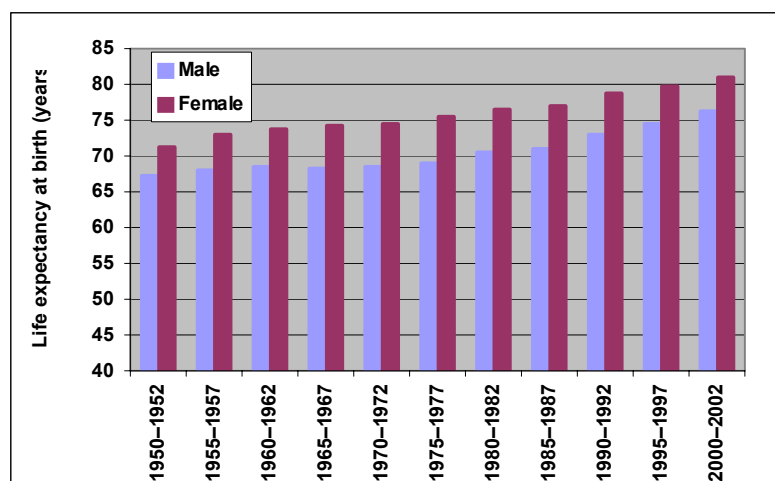
Males die at a younger age from cardiovascular conditions and have an earlier age of onset.

Suicide rates are much higher amongst males, but females have a higher discharge rate for intentional self harm.

8.2 Life expectancy and mortality

Females live longer than males with a life expectancy of 81.3 years compared to 75.7 years for males (C&C DHB 1996-2000). There is a trend toward increasing longevity, as shown in the graph below.

Trend in life expectancy by gender, NZ, 1950-2002



Data source: Statistics New Zealand

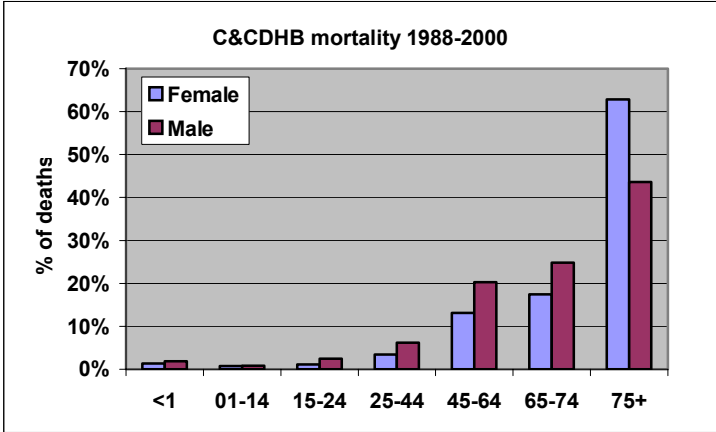
¹⁰⁴ Health Canada. http://www.hc-sc.gc.ca/english/women/exploringconcepts_1.htm#1. Accessed 16/09/04

¹⁰⁵ Ostlin 2002

¹⁰⁶ Ministry of Health 1999

In 2001, independent life expectancy¹⁰⁷ for males was 64.8 years and for females was 68.5 years. Independent life expectancy has increased for females since 1996 but has not improved for males.

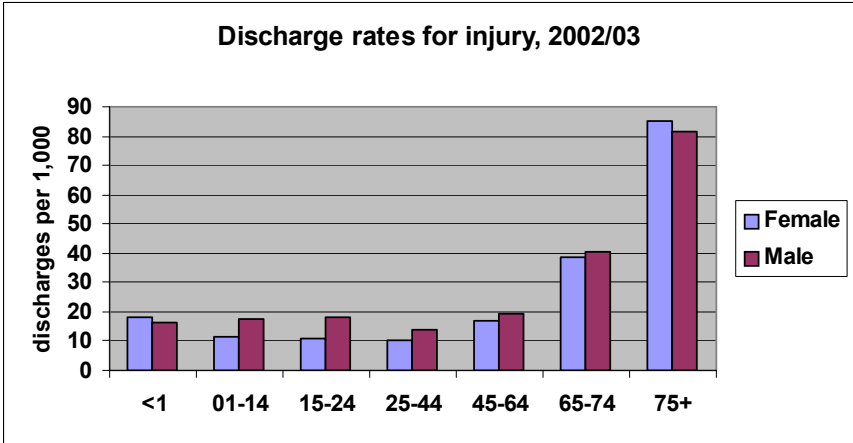
Mortality by age and gender, C&C DHB 1988-2000



Males have higher mortality rates than females at all ages up until 75. For people aged 75 and over females have higher mortality rates than males.

8.3 Injuries

Hospital discharge rates for injury by gender & age, C&C DHB, 2002/03



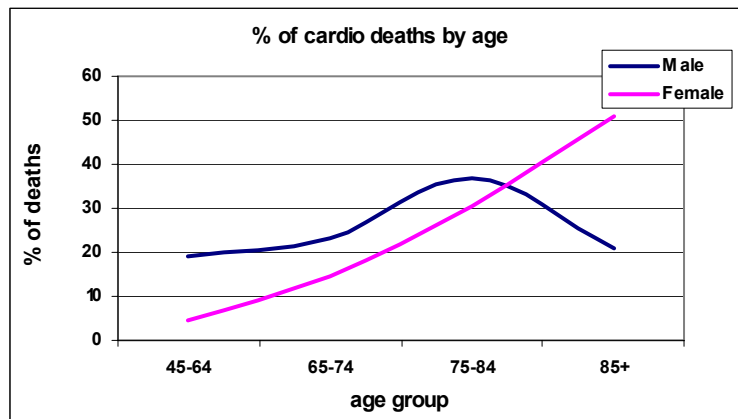
Data source: Ministry of Health

Hospital discharge rates for injury show differences between genders. As can be seen in the graph above, hospitalisation due to injury is more common amongst males than females in all age groups except infants under 1 and the elderly (aged 75 and over). The difference is most marked in children and young people. Boys aged 1 to 14 have a 53% higher discharge rate than girls of the same age. Male youths (aged 15 to 24) have a 60% higher discharge rate than females of the same age.

¹⁰⁷ Independent life expectancy is defined as the number of years a person could expect to live without any functional limitation (disability) requiring the assistance of another person or complex assistive device. (figures are national)

8.4 Cardiovascular

Cardiovascular mortality rates by age & gender, C&C DHB 2000



Data source: Ministry of Health

Males have earlier onset of cardiovascular disease than women. The graph above shows that males die at a younger age from cardiovascular conditions.

8.5 Population health

There are gender differences in smoking rates. Smoking prevalence in C&C DHB for 2002 was 21% for males compared to 19% for females. However, amongst the young, more females than males smoke. In the Hutt Valley Public Health Unit region, 15% of males aged 14-15 and 22% of females aged 14-15 are at least weekly smokers. This difference is most significant amongst Maori youths, where twice as many females as males smoke.

Males are more likely to be overweight than females. However, this pattern is reversed for obesity, with females more likely to be obese than males. This gender difference in obesity levels is not significant for Maori, and is most marked for Pacific people.

In females, there is a strong relationship between deprivation and obesity. Females living in NZDep quartile 1 areas had the lowest level of obesity (13%) compared with those living in quartile 4 areas (25%). This relationship is not significant in males.

In general, males are considered more active than females. On average, boys are active for 1½ hours more a week than girls and 9% more boys than girls are considered active. On average, men are active for 2 hours more a week than women.

8.6 Mental health

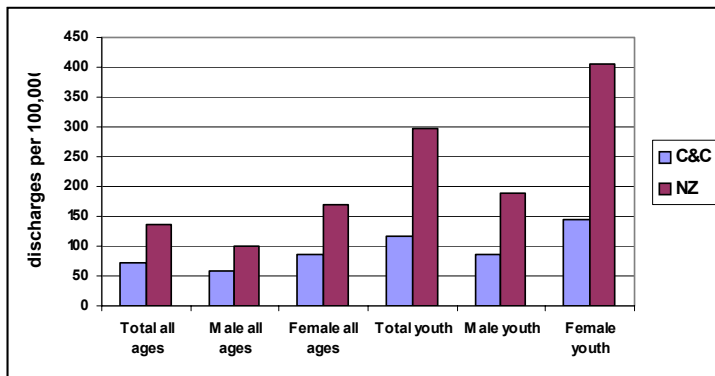
The MaGPIe study of patients attending GP practices highlighted gender differences in the prevalence of different types of mental disorders. Substance use disorders were found to be twice as common among males than females. Anxiety disorders were twice as common among females than males and depression also more common in females.

8.7 Suicide

Suicide rates are strongly influenced by gender. Of all suicides between 1988 and 2000 in C&C DHB, 74% were males and 26% were females. However, females have a higher

discharge rate for intentional self-harm than males. The difference is most marked amongst youth.

Discharge rate for intentional self-harm 2000/01



Source: NZHIS

Chapter 9: Summary of gaps

9.1 Introduction

The chapter attempts to provide a summary of broad areas of need identified in this document. As noted in the introduction these will be further refined through the planning and prioritisation processes. Health need is difficult to describe as it is often complex, multi-faceted and determinants of health are multiple and varied. In this chapter need and determinants of needs have been covered in the following three areas. Because of the complexity of inter-relationships between some of these things, all of the following need to be considered when planning and prioritising health services and health prevention:

- High needs population groups.
- Conditions with the greatest burden of disease.
- Other issues affecting health and wellbeing.

9.2 High needs population groups

This section discusses the major population groups with greater than average health need. It lists the areas that indicate that in general the populations in these groups have high health needs and gives an indication of the size of the group. It then goes on to identify the areas where these groups have particular health needs. Note that the groupings used are identified by a number of variables and hence it may be possible for an individual to be a member of more than one of these groups.

9.2.1 *People in areas of high deprivation*

18% of the C&C DHB population lives in NZdep 9 and 10 areas. The majority of these areas are in Porirua. Areas that indicate that people in areas of high deprivation in general have high health needs are:

Life expectancy for those who live in NZdep 9 and 10 areas is shorter than the population as a whole, by 5.6 years for females and 9.5 years for males.

Morbidity rates are higher for people from more deprived areas. The rate for people living in NZdep 10 is almost twice the rate for people living in NZdep 1.

The proportion of hospitalisations that are avoidable increases with increasing deprivation, from 25% for NZdep 1 to over 30% for NZdep 10.

People from areas of high deprivation have higher rates of emergency department attendances.

Areas of specific need are:

Cardiovascular disease

- Stroke – higher than district rate.
- Angina – consistently higher than district rate.
- Heart failure – higher than district rate.

Cancer

Lung cancer registrations higher than district rate.

Diabetes

The diabetes mortality rate is 2 – 3 times that for those in less deprived areas.

Respiratory

CORD rate high in Wellington and Porirua.

Children

20.7% of the C&C DHB population is aged 0 – 14 years. Areas that indicate that children in general have high health needs are:

Morbidity rates are very high for infants aged under one.

Children from more deprived areas have higher avoidable and unavoidable morbidity rates than those from less deprived areas.

Areas of specific need are:

Generally:

- Injury and poisoning
- Cancer
- Respiratory conditions
- Perinatal conditions

Pacific children's health is poorer than any other group. They have:

- Significantly higher morbidity for pneumonia and asthma.
- Higher rates of children failing school entry hearing tests.
- Lower percentage of five year olds caries free.
- High rates of hospitalisation for injury for children aged under five.
- High rates of preventable hospitalisations for children aged five to 14.
- High rates of ambulatory sensitive hospitalisations for all children.
- High rates of cellulitis.
- Higher rates of children failing hearing tests
- Poorer oral health

The health of Maori children is also poorer than average for many of the above indicators, but not as bad as that of Pacific children. The areas where Maori children are worse off than the average child in the district are:

- High morbidity for pneumonia, and high morbidity for asthma in Wellington.
- Slightly higher than average rates of failure in school entry hearing tests.

- Higher percentage of five year olds caries free.
- High rates of ambulatory sensitive hospitalisations for children aged five to 14.
- High rates of cellulitis.
- Higher rates of children failing hearing tests
- Poorer oral health

Older people

10.3% of the C&C DHB population is aged 65+ and the population is continuing to age. Areas that indicate that older people in general have high health needs are:

Morbidity rates increase with age from age 65. In particular older people from more deprived areas have higher morbidity rates than those from less deprived areas, and the avoidable morbidity rate for those aged 65 – 74 from deprived areas is almost twice the rate for those from the least deprived areas.

Emergency department presentations increase with age from 65.

Areas of specific need are:

Cardiovascular disease is the largest burden of disease for older people. Males have an earlier age of onset than females.

Cancer mortality rate increases with age

Respiratory conditions are a major cause of morbidity amongst older people

Diabetes mortality rate increasing by 9% per annum and increases with age. It is now higher than national rate. Morbidity from diabetes also increases with age.

Injuries (mostly from falls) are also a major cause of morbidity amongst older people. They are a particular problem for females aged 75 plus.

Older people with multiple morbidities.

9.2.4 Maori

Maori make up 9.9% of the C&C DHB population. Areas that indicate that Maori in general have high health needs are:

Maori life expectancy is shorter than the population as a whole, by 8.7 years for females and 8.2 years for males.

Independent life expectancy for Maori is shorter than the population as a whole, by 9.2 years for females and 7.2 years for males.

The average age of death for Maori for 2000 was 57 years compared with 73 years for the district as a whole. For the population aged over 25 only, the average age of death for Maori was 59 years compared to 75 years for the district.

Maori have higher rates of emergency department attendances than the population as a whole for anyone aged over 14.

Areas of specific need are:

Cardiovascular disease

Acute Myocardial Infarction – Maori have higher and increasing morbidity from acute myocardial infarctions and average age of onset 15 years earlier than for the district as a whole.

Angina – Maori have higher morbidity in both Porirua and Wellington and average age of onset is 15 years earlier than for the district as a whole.

Stroke – Overall Maori have a low rate of stroke, but within this the rate in Porirua is high and the average age of onset is 20 years earlier than for the district as a whole.

Heart failure – Maori have higher morbidity (especially in Porirua) and average age of onset 25 years earlier than for the district as a whole.

Maori have high rates of chronic rheumatic heart disease.

Cancer

Maori have high breast cancer morbidity, but registrations for breast cancer are lower than district rate.

Both lung cancer morbidity for Maori in Porirua and Wellington and registrations are high.

Diabetes

Diabetes morbidity is very high for Maori in Porirua.

Respiratory

Rates of respiratory infections, asthma, and CORD for Maori are high in both Wellington and Porirua.

9.2.5 Pacific

Pacific peoples make up 7.6% of the C&C DHB population. Areas that indicate that Pacific peoples in general have high health needs are:

Pacific life expectancy is shorter than the district average.

The average age of death for Pacific for 2000 was 59 years compared with 73 years for the district as a whole. For the population aged over 25 only, the average age of death for Pacific was 64 years compared to 75 years for the district.

Pacific have higher rates of emergency department attendances than the population as a whole for all age groups apart from those aged 15 – 24 years.

Areas of specific need are:

Cardiovascular disease

Stroke – Pacific peoples have 2 to 3 times the district rate of stroke morbidity and age of onset 15 years earlier than for the district as a whole.

Acute Myocardial Infarction – Pacific peoples have high and increasing morbidity from acute myocardial infarctions and an average age of onset 8 years earlier than for the district as a whole.

Angina – Pacific in Wellington have high rates of Angina. The average age of onset 10 years earlier than for the district as a whole.

Heart failure – Pacific have high morbidity (especially in Wellington) and average age of onset 15 years earlier than for the district as a whole.

Cancer

Breast cancer morbidity for Pacific is high in Wellington, but overall registrations are similar to district rate. The rate of breast screening is low for Pacific women.

Lung cancer registrations are high for Pacific.

Prostate cancer morbidity is high for Pacific in Porirua.

Colo-rectal cancer morbidity is high for Pacific in Wellington.

Diabetes

Diabetes morbidity is high for Pacific in both Porirua and Wellington.

Respiratory

Rates of respiratory infections, asthma, and CORD for Maori are high in both Wellington and Porirua.

Child Health

The health of Pacific children is very poor when compared to all other groups. See section 9.2.2 above for more details on the specific conditions.

9.2.6 Other groups

Within the C&C DHB population there are numbers of other, mainly smaller, groups with particular needs. Three of these groups are people with a disability (estimated at 20% of the C&C DHB population), refugees, and people with severe mental illness (estimated at 3% of the population). These are not covered in depth in this chapter as it is not possible to identify these people in much of the available information on health utilisation and mortality.

9.2 Conditions with high burden of disease

This section summarises the areas for improvement for conditions where the burden of disease is high. The priority areas with the largest burden of disease in the district are:

Cardiovascular conditions – These are still the largest cause of burden of disease in New Zealand and the leading cause of death for people aged 40 and over. One third of avoidable deaths are from cardiovascular conditions. Males die from cardiovascular conditions earlier than females.

Cancer – The second largest burden of disease in New Zealand. 47% of avoidable deaths in the district are due to cancer.

Respiratory conditions – Respiratory conditions are the fifth most significant health issue as measured by burden of disease, but are the third most significant issue for Maori.

Diabetes – This condition is a significant cause of poor health and premature death. The mortality rate from diabetes has been increasing rapidly and the district rate has now passed the national rate.

Disabilities - People with disabilities make up an estimated 20% of the population. Disabilities are a major issue influencing both health status and access to health services.

Mental illness – Mental affects an estimated 20% of the population at any one time. Serious mental illness affects only around 3% of the population, but is serious and disabling.

9.4 Issues affecting health and wellbeing

There are many issues that affect the health and wellbeing of the population including some of which have a particular impact on the groups identified in section 9.2. These issues may either be indicated by data in the document, known determinants of health status, or other issues for which there is only anecdotal evidence to say that they have an impact on health status. Many of these issues are such that they cannot be directly impacted by the health sector and hence underline the importance of multiple, interlinked, inter-sectoral approaches to addressing determinants of health. These issues include:

9.4.1 Deprivation

On average across New Zealand, 20% of the population will live in NZdep 9 and 10 areas. The Capital and Coast district is slightly better off than this with only 18% of its population living in NZdep 9 and 10 areas. This is not the case for many of the groups identified in section 9.2 however:

35% of Maori live in NZdep 9 and 10 areas.

62% of Pacific live in NZdep 9 and 10 areas.

Deprivation takes into account nine variables, all of which may be linked in some way to health status:

Income, income support, and employment – low income may affect access to health services.

Access to transport and telephones – although by New Zealand standards all of the Capital and Coast district population live close to hospital and health services, and none of the district is categorised as rural, however people with limited access to transport still have difficulties accessing health services.

Qualifications. A lack of education may affect understanding of the factors influencing health, and when it is appropriate to access health services which may lead to under-utilisation of services.

Overcrowding – linked to respiratory conditions.

Single parent.

Home ownership status.

The best way to influence many of the above factors is through inter-sectoral programs in the areas of housing, social development, transport, employment and benefits, and education.

9.4.2 PHO enrolment

Both Maori and those in areas of high deprivation have low PHO enrolment compared to others in the district (75% and 76% compared to 89%). This indicates that they may not be appropriately accessing primary care services.

PHO enrolment does not appear to be an issue for Pacific peoples with 99% of the population enrolled in a PHO.

9.4.3 Utilisation of existing services

Some of the groups identified in section 9.2 have low utilisation of some existing services aimed at some the priority conditions. In particular:

The diabetes case detection rate is low for Maori.

The diabetes case management rate is high for Maori and Pacific.

Breast screening rates for Maori and Pacific are lower than the district rate.

9.4.4 Population health

Some factors are known to be linked with some of the conditions that have a major impact in terms of burden of disease. These include smoking, nutrition, overweight and obesity, and physical activity. A number of the groups identified in section 9.2 could improve on these factors including:

Smoking rates for Maori and Pacific are high and no decrease in rates has been apparent.

Obesity rates for the district are high and increasing. These are especially high for Maori, Pacific, and women in areas of high deprivation.

9.4.5 Other

Other factors that can be directly or indirectly linked to health and well-being include:

Relational issues. The health of relationships can impact on people's mental, emotional and physical wellbeing. Some areas for improvement include around violence, where Maori for example are more likely to be victims of violence than people of other ethnicities.

Physical considerations. Many of these are covered under the heading of deprivation above, but there may be some additional ones such as heating for houses which is known to influence conditions such as respiratory infections.

Provider capacity – This may be either in terms of physical space, number or type of providers available in a particular area or discipline. It is known that in some areas providers do not have the capacity to meet the need or demand for health services. This is a particular concern in Porirua where large numbers of the high needs populations identified in section 9.2 live.

Cultural barriers – The cultural appropriateness of services (includes perceived attitudes of health workers and acceptability of health providers to Maori, Pacific, other ethnic groups, or population sub-groups such as youth) may influence whether people choose to access health services. It should be noted that the majority of services currently provided in New Zealand are based on European models of health care.

Spirituality – A simple definition of spirituality is “that which gives life meaning”. Lack of meaning can impact people’s health and well-being. On the other hand a positive spirituality can help prevent illness, assist recovery from surgery, reduce mental illness and assist coping with illness.

Language barriers – Lack of language ability prevents some people from accessing services. This may either be because they do not have the language ability or confidence to access services, or do not have local knowledge about where or how to access health services.

Psycho-social – Research has indicated that lack of participation in social or community groups is an independent predictor of both mortality and morbidity.

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Acknowledgments

Rebecca Rippon and Rachel Trevathan were the main authors of this document. Rebecca Rippon performed most of the data analysis. The Primary and Community Health, Maori, Mental Health, and Pacific teams of Capital and Coast DHB's Planning and Funding Directorate provided the majority of the information in chapter 4 on their portfolios. In addition other staff from the directorate contributed to this document by assisting with analysis, peer-review, proof reading, and providing data and information.

We thank the Maori Partnership Board, the Disability and the Community and Public Health Advisory Committees, external providers, organisations, and individuals for their comment on earlier drafts.

Dr Darren Hunt gave advice and data on cellulitis. Central TAS provided information on avoidable hospitalisations. The New Zealand Health Information Service provided access to the Laboratory Data Warehouse, and PharmHouse systems. We also thank Anna Davies, also of NZHIS, for providing data on alcohol and drugs within a short timeframe. Kimmo Wiltshire of Capital Support provided DSS data. Mortality data, and the majority of morbidity data, including the algorithms for avoidable events, were provided by the Ministry of Health. Some morbidity, emergency department, and outpatient data was provided by the DHB provider arm. Ruth Pirie at Environmental Science and Research Ltd provided notification data for communicable diseases. Kirsten Forsyth and Aotasi Iose of the Wellington Regional Council provided information and comment around environmental indicators.