Chapter 7. Acute Medicine

Introduction

The specialities of medicine provided by South Auckland Health are cardiology, clinical haematology, diabetes, metabolic medicine, gastroenterology and hepatology, infectious diseases, internal medicine, neurology, palliative care, renal, respiratory and rheumatology. Oncology, more complex neurology, transplant medicine and clinical genetics services are provided by Auckland Healthcare.

Counties Manukau has a relatively high medical discharge rate especially considering the population is younger than other parts of New Zealand (Table 69). Only a few of the more rural areas have a higher medical discharge rate.

Table 69. Public hospital medical discharge rates 1999

	Medical discharge rates	Total discharge rates	Medicine as % of all discharges
Northland	91	232	39%
North Shore	48	139	34%
West Auckland	50	158	32%
Central Auckland	54	157	35%
Counties Manukau	**77**	**194**	**40%**
Waikato	72	195	37%
Bay of Plenty	79	215	37%
Tairawhiti/Hawkes Bay	80	214	37%
Wanganui/Manawatu	58	185	31%
Taranaki	83	227	36%
Wellington	59	165	36%
Nelson/Marlborough	52	173	30%
Canterbury/ West Coast	68	193	35%
Otago/Southland	61	178	34%
New Zealand	66	184	36%

Note: Rates are crude discharge rates per 1000 population, all ages.

Common conditions such as angina, pneumonia and cellulitis are much more so in Counties Manukau, while diseases of poverty such as TB, rheumatic fever and cellulitis feature more prominently among the Counties Manukau population (Table 70).

Table 70. Hospitalisation rates for selected medical conditions, Counties Manukau compared with New Zealand, 1999

	Counties Manukau	New Zealand
Angina	810	653
Pneumonia	508	310
Cellulitis	355	253
Asthma	261	236
Ischaemic heart disease	248	262
Chronic obstructive respiratory disease	247	233
Congestive heart failure	199	177
Stroke	174	160
Diabetes	116	91
Tuberculosis	28	9
Rheumatic fever	21	15

Source: NMDS. Rates per 100,000 population, age-standardised to the NZ population.
For definitions of conditions see relevant sub-section later in this Chapter.

Rather than attempting to sub-divide medicine by speciality area, this chapter examines the most common medical conditions that these medical discharges are from. Whilst some child conditions are covered in this section (eg asthma), paediatric medicine is mainly covered in Chapter 10 Child health. Pregnancy and childbirth is covered in Chapter 9 Women's health, and surgery in Chapter 8 Surgery. Age group-specific issues are covered in Chapter 4 Life cycle, including injuries.

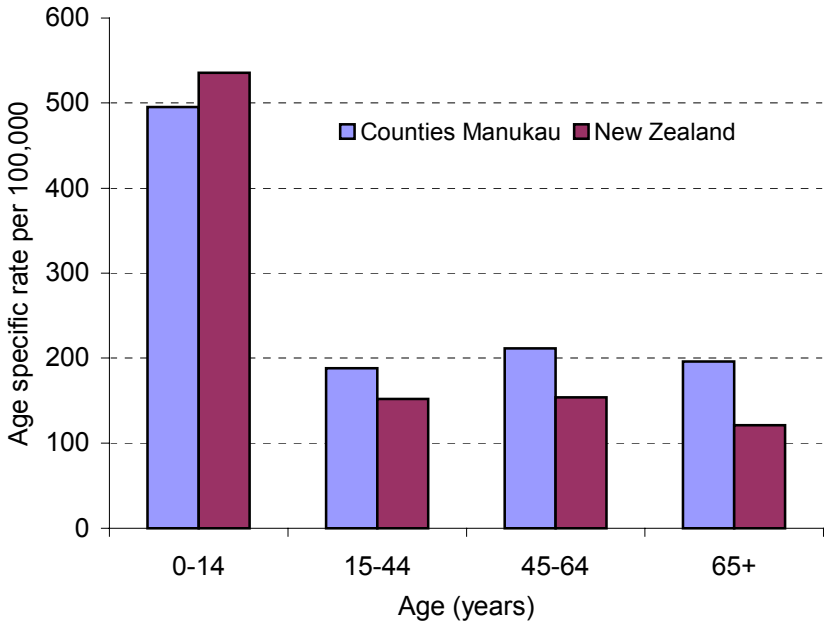
All data in this Chapter is sourced from the National Minimum Data Set (NMDS) unless otherwise stated.

Asthma

Asthma is a disease of the airways that is characterised by their increased responsiveness to a number of stimuli. Asthma is thought to have a number of causes including allergens, air pollution, infections, exercise and emotional stress. The following analysis is based on inpatient discharges with the principal diagnosis of asthma, ICD-9-CM: 493.

In 1999, there were 1065 asthma discharges recorded for Counties Manukau residents, an age-standardised rate of 261 (95% CI 245-277) per 100,000. This was significantly higher than the rate of 236 (231-241) per 100,000 for the New Zealand population. Counties Manukau rates are higher than the New Zealand rates for all age groups except for those aged under 15 years (Figure 72). The 0-14 year age group has the highest discharge rate, over double that of the other age groups.

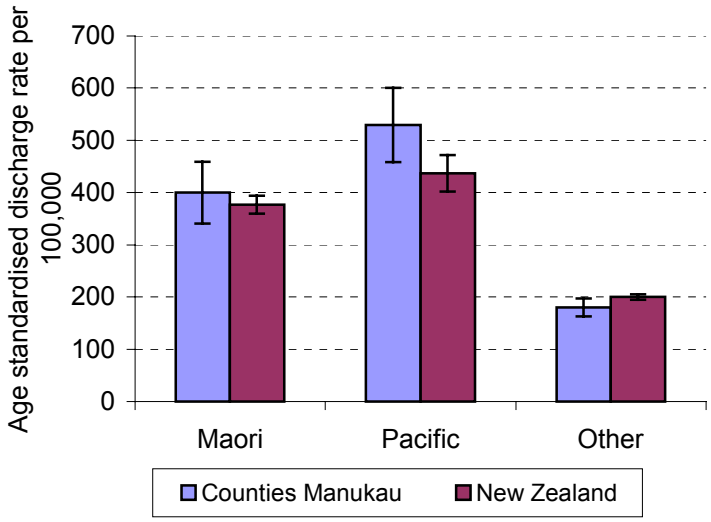
Figure 72. Age-specific rates of asthma discharges for Counties Manukau residents and New Zealand, 1999



For both the New Zealand and Counties Manukau populations, the Pacific hospitalisation rate is higher than the other ethnic groups (Figure 73). The Maori rate is higher than the other ethnic group. For the Maori and other ethnic groups, the Counties

Manukau rate is similar to the national figures, while the Counties Manukau Pacific rate is increased without reaching statistical significance.

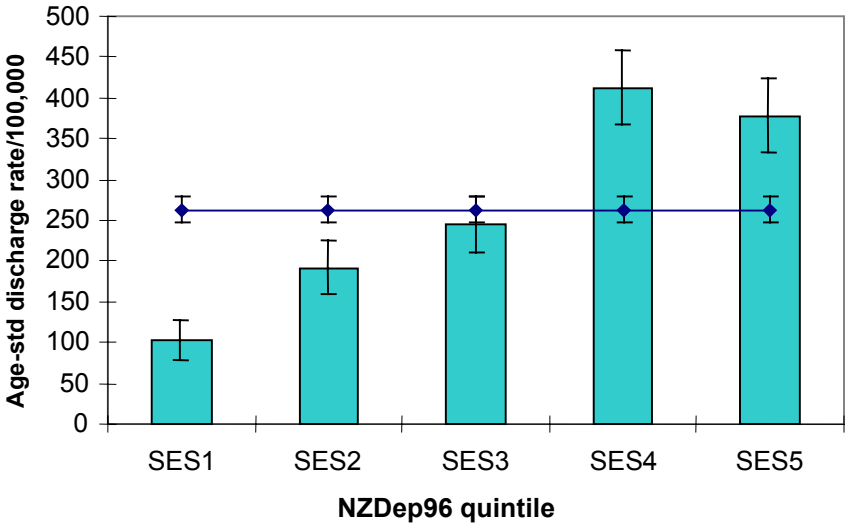
Figure 73. Age standardised asthma discharge rates by ethnicity for Counties Manukau residents and New Zealand, 1999



Note: Age-standardised rate per 100,000 population. All ages. Vertical bars show 95% confidence intervals.

The rate of asthma discharges is clearly higher in Maori and Pacific peoples but it is not clear if this is related to poverty or to a higher susceptibility to asthma (for whatever reason) amongst these ethnic groups. If we look at the relation of asthma discharges to socio-economic status as defined by the NZDep96 we obtain the picture in the graph below (Figure 74). The 40% of people living in the most deprived areas (SES4 and SES5) have a significantly higher rate of discharges than the 40% living in the least deprived areas (SES1 and SES2).

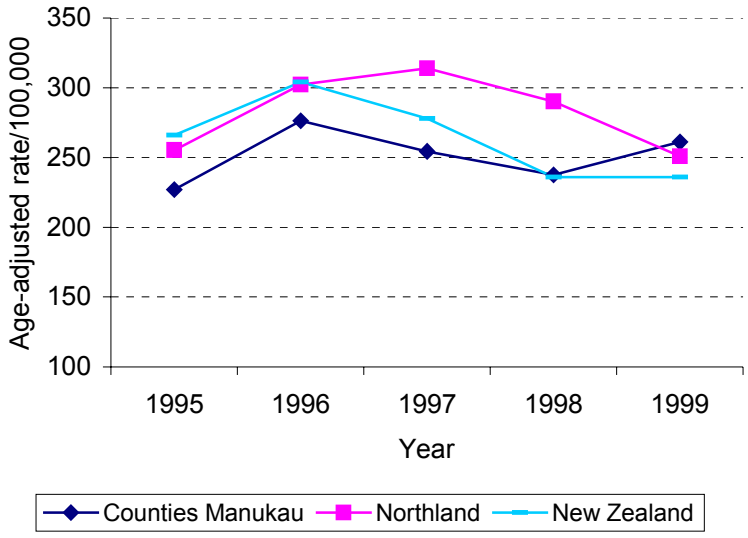
Figure 74. Asthma age standardised discharge rate by deprivation level of area of domicile, Counties Manukau, 1999



Note: Age-standardised rate per 100,000 population. All ages. Vertical bars show 95% confidence intervals, horizontal line shows Counties Manukau average (complete with confidence intervals).

Prior to 1999 Counties Manukau asthma discharge rates were slightly lower than that of the general New Zealand population (Figure 75). An increase in 1999 saw Counties Manukau move to be significantly higher than the all New Zealand population (age-standardised), and even higher than Northland, the previously highest hospitalisation area (shown in Figure 75 for comparison). The excess is particularly found in the 15-64 population, and may relate to the inappropriate use of preventive medication and primary care.

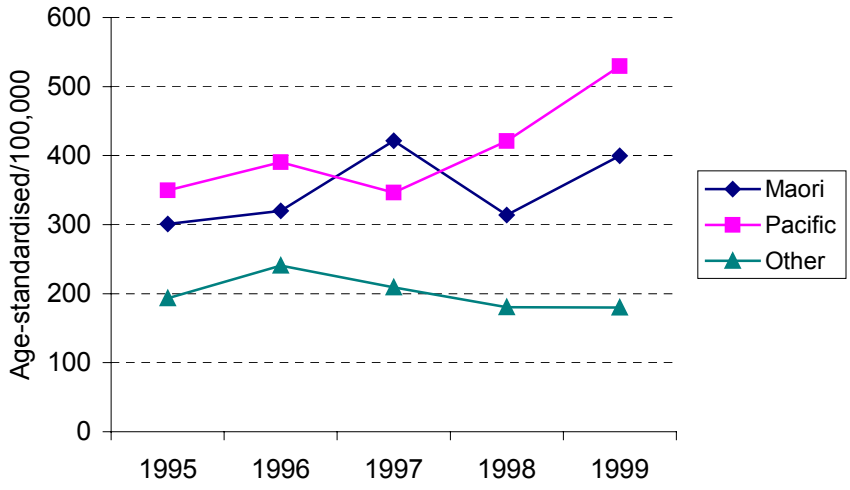
Figure 75. Age-standardised rate of asthma discharges, Counties Manukau and New Zealand, 1995-1999.



Note: Age-standardised rate per 100,000 population. All ages. Y-axis does not start at 0.

The Counties Manukau Maori discharge rate has fluctuated over the past five years, the Other ethnic group have had a slight decrease in rates, and the Pacific discharge rates have increased since 1995 (Figure 76). The gap between the Other and Maori and Pacific groups appears to be widening.

Figure 76. Age-standardised rates of asthma by ethnicity for Counties Manukau residents 1995-1999



This document can only speculate as to the reasons for this widening gap. The finding may reflect poorer housing and dampness, but may also reflect poorer access to primary health care and less understanding or acceptance of asthma action plans. Decreasing access to or use of primary care seems more likely than changes in disease prevalence or severity, and is likely to relate to some of the socio-economic factors discussed in Chapter 3 *Health Inequalities*.

Summary - asthma

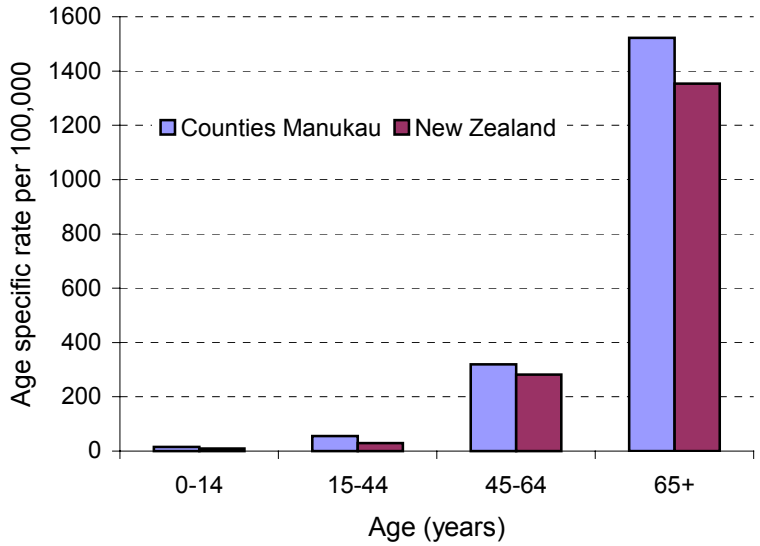
Discharge rates for asthma in Counties Manukau have remained fairly constant since 1995, and are similar to rates found for New Zealand. The Pacific and Maori rates are higher than that of the Other ethnic group. People e living in the area ranked as most deprived have significantly higher rates of asthma discharges than those living in the least deprived areas. Maori and Pacific people are significantly over-represented in these areas. The Counties Manukau Pacific rate has been increasing since 1995 and is higher than that of the least deprived 20% of CM residents. The reason for these increasing rates in the face of improved asthma management options needs further exploration. The finding may reflect poorer housing and dampness, but may also reflect poorer access to primary health care and less understanding or acceptance of asthma action plans.

Chronic obstructive respiratory disease (CORD)

Chronic obstructive respiratory disease (CORD) is defined as a condition in which there is chronic obstruction to airflow due to chronic bronchitis and/or emphysema. Tobacco smoking is the most commonly identified risk factor for this disease. The following analysis is based on discharges with the principal diagnosis of chronic obstructive pulmonary disease, it therefore includes the ICD-9-CM classification codes 490- 492, and 496.

In 1999, there were 874 CORD discharges for Counties Manukau residents, an age-standardised rate of 275 per 100,000 (95% CI 257-294). This is significantly higher than the total New Zealand rate of 233 (228-238) per 100,000. Counties Manukau rates are higher than the New Zealand population for all age groups (Figure 77).

Figure 77. CORD age-specific discharge rates for Counties Manukau residents and New Zealand, 1999



Pacific and Maori populations have significantly higher rates of CORD than the "Other" ethnic group (Figure 78). In Counties Manukau, the Maori rate is over double, and the Pacific rate is over three times that of the other ethnic group. The Counties Manukau Maori and Pacific rates are higher than those found nationally, the Pacific significantly so. The Counties Manukau "Other" population has rates very similar to the national rate. Given current smoking rates one would have expected the Maori rate to be highest.

A linear relationship exists between the rate of discharges for CORD and the deprivation level of the area of residence (Figure 79). The relatively more deprived the area the person lives in the more likely they are to be admitted with CORD. As for asthma the Pacific peoples have a much higher rate than those living in SES5 areas whereas the Maori rate is only slightly higher. Factors in the Pacific community over and above those operating at an area of deprivation are increasing the risks of hospitalisation.

Figure 78. CORD age-standardised discharge rate by ethnicity for Counties Manukau residents and New Zealand, 1999

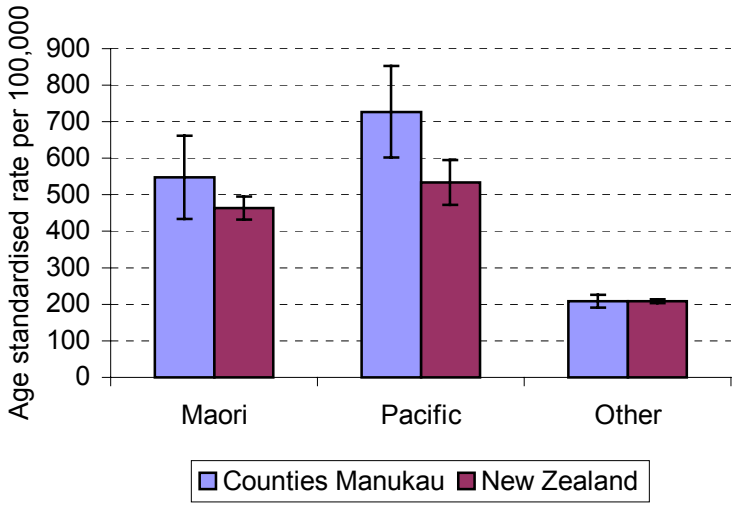
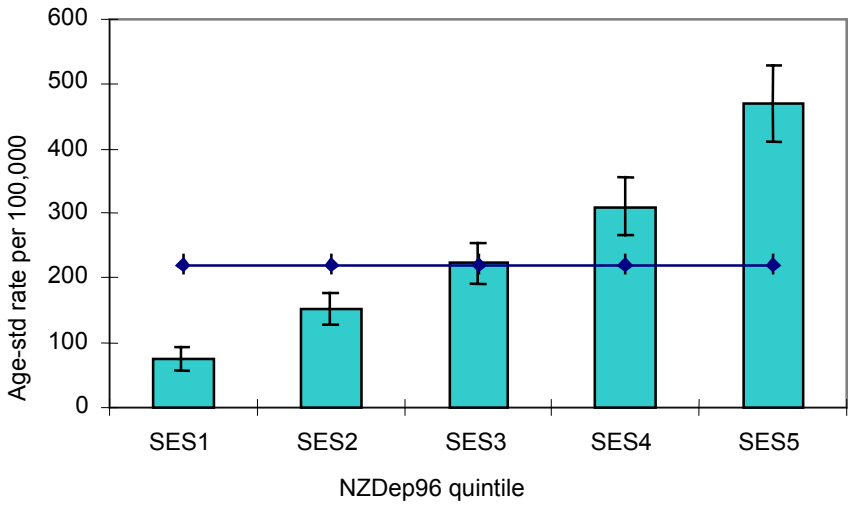


Figure 79. CORD age standardised discharge rate by deprivation level of area of domicile, Counties Manukau, 1999



Note: Age-standardised rate per 100,000 population. All ages. Vertical bars show 95% confidence intervals, horizontal line shows Counties Manukau average (complete with confidence intervals).

Rates of CORD discharges have increased since 1995 for both Counties Manukau and New Zealand as a whole (Figure 80). The Counties Manukau rate has followed a very similar trend to the New Zealand population, but the rates have been consistently higher.

The Maori and Pacific rates have been consistently higher than the other ethnic group over the last five years (Figure 81). The Maori rate of CORD discharges has fluctuated somewhat, while the Pacific rate seems to have been increasing since 1995.

Figure 80. Age-standardised rate of CORD discharges, Counties Manukau and New Zealand, 1995-1999

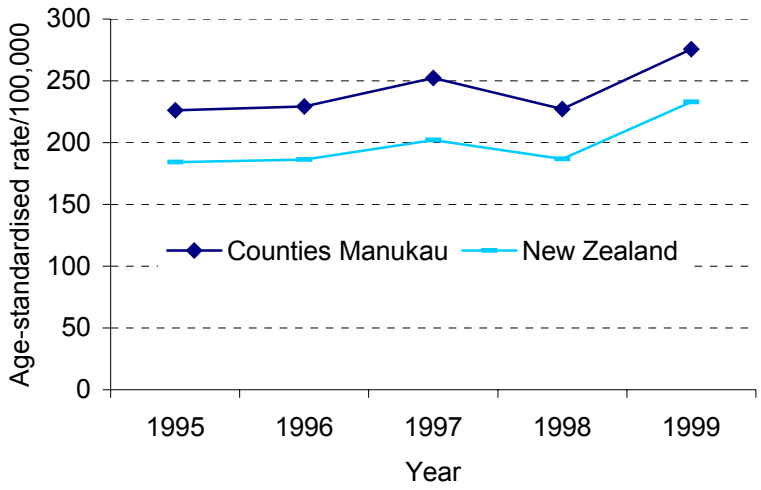
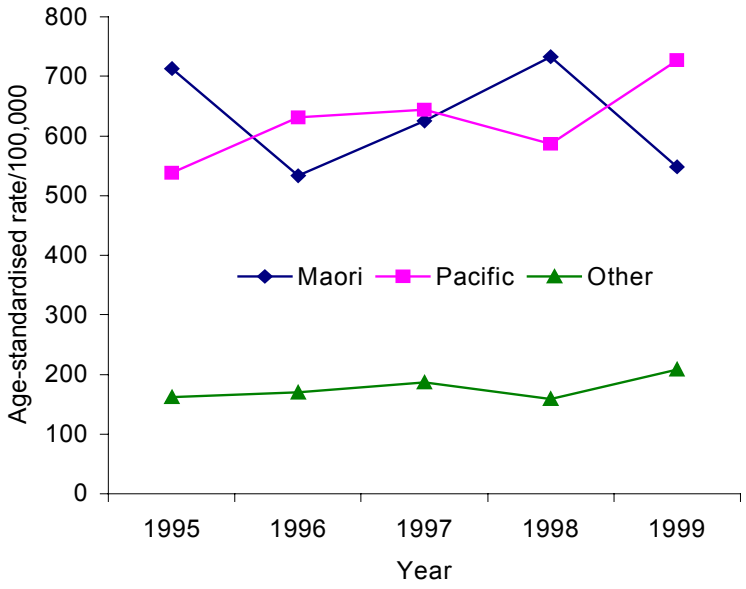


Figure 81. Age-standardised discharge rates of CORD by ethnicity for Counties Manukau residents 1995-1999



Summary - CORD

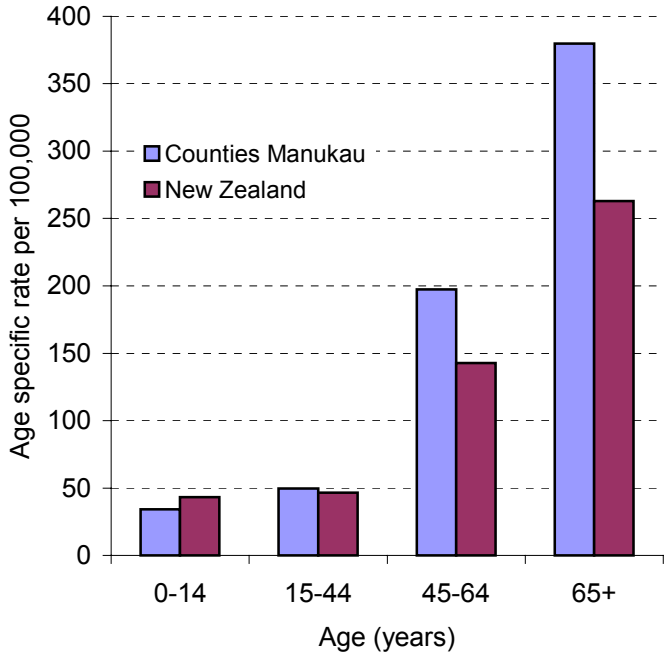
In Counties Manukau, CORD discharges have increased since 1995, and age-standardised rates are significantly higher than New Zealand, presumably related to past tobacco usage. The increasing trend is similar to that seen for New Zealand. Discharge rates are closely linked to area of deprivation with the people living in the most deprived areas having significantly more discharges than those living in the least deprived areas. Maori rates are slightly higher than those in the most deprived areas and Pacific rates are significantly higher. Maori and Pacific peoples have a higher than expected prevalence of smoking that will impact on discharges for CORD (see Chapter 3 Health Inequalities, page 50). Avoidance of hospitalisation for CORD requires access to good primary health care since the use of steroids and antibiotics are often required to prevent exacerbations.

Diabetes

Diabetes mellitus is characterised by raised blood glucose (hyperglycaemia). There are two main types of diabetes: type 1 diabetes, caused by destruction of insulin-producing cells, leading to insulin deficit; and type 2 diabetes, caused by a combination of resistance to insulin and a relative insulin deficit. No differentiation between these two types is made in the following analysis. Figures are based on discharges with the principal diagnosis of diabetes, which includes the following classification codes ICD-9: 2501-2503, 2510 and 2512. Admissions for complications of diabetes like eye conditions, neuropathy, arterial disease and amputation are not included here.

In 1999, there were 403 discharges for diabetes for Counties Manukau residents, a rate of 116 (95% CI 105-128) per 100,000. This is significantly higher than the 91 per 100,000 (88-94) of the New Zealand population. The age-specific discharge rates for the Counties Manukau under 45 year olds are much the same as New Zealand. For those aged over 45 years, Counties Manukau rates are significantly higher than the general New Zealand population (Figure 82). It seems the Counties Manukau excess is for type 2 rather than type 1 diabetes.

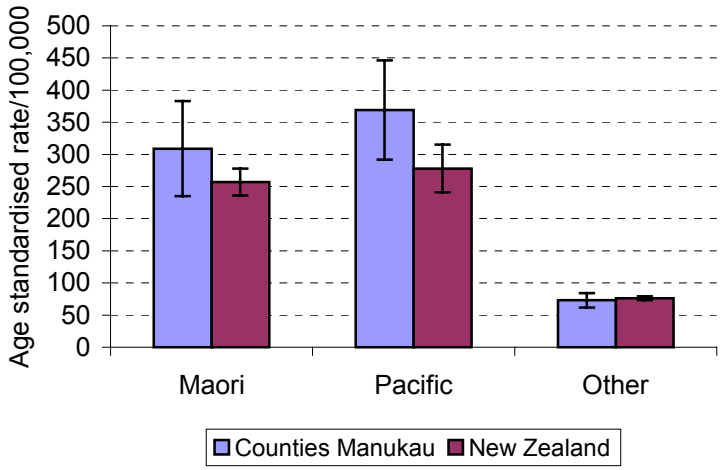
Figure 82. Age-specific discharge rates of diabetes for Counties Manukau residents and New Zealand, 1999



Diabetes is much more prevalent in the Maori and Pacific populations, which shows through into hospitalisations (Figure 83). The New Zealand Health Survey found the prevalence of diagnosed diabetes to be 8.3% for Maori, 8.1% for Pacific and 3.1% for European/Pakeha[1]. For the Counties Manukau population the Maori hospitalisation rate is four times and the Pacific rate is five times that of the "Other" ethnic group – much higher than the three-fold prevalence figure would indicate. For both these ethnic groups, the Counties Manukau rate is higher than found nationally, while the "Other" ethnic group has similar rates.

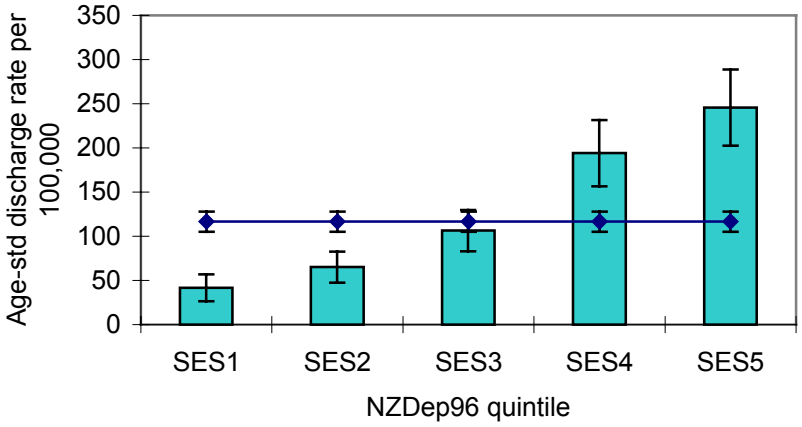
[1] Ministry of Health. *Taking the Pulse*. 1999. p101.

Figure 83. Age-standardised rate of diabetes discharges by ethnicity, Counties Manukau residents and New Zealand, 1999.



The 40% of the Counties Manukau population living in the least deprived areas have lower discharge rates for diabetes than the average for Counties Manukau, while the 40% of people living in the most deprived areas have significantly higher rates (Figure 84). Both the Maori and Pacific age-standardised rates are higher than the SES5 rate (and indeed both are over-represented in the SES5 areas), indicating a clear ethnic component to diabetes hospitalisation rates. The mechanism would seem to be through more than just increased prevalence – perhaps increased severity of disease, or lower access to primary care services.

Figure 84. Diabetes age standardised discharge rate by deprivation level of area of domicile, Counties Manukau, 1999



Note: Age-standardised rate per 100,000 population. All ages. Vertical bars show 95% confidence intervals, horizontal line shows Counties Manukau average (complete with confidence intervals).

Counties Manukau diabetes hospitalisation rates have remained reasonably stable since 1995 (Figure 85). This is a similar trend seen for the total New Zealand population. Northland (as a relatively deprived comparator) has had significantly higher rates than Counties Manukau since 1997, presumably related to its large Maori population.

Although the discharge rates for Maori and other ethnic groups in Counties Manukau have decreased slightly since 1995, the Pacific rate has gradually increased (Figure 86).

Figure 85. Age-standardised rate of diabetes discharges, Counties Manukau, Northland and New Zealand, 1995-1999.

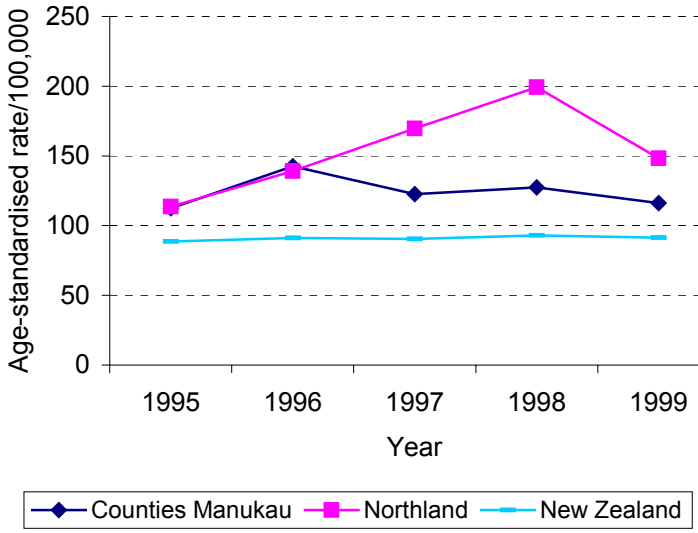
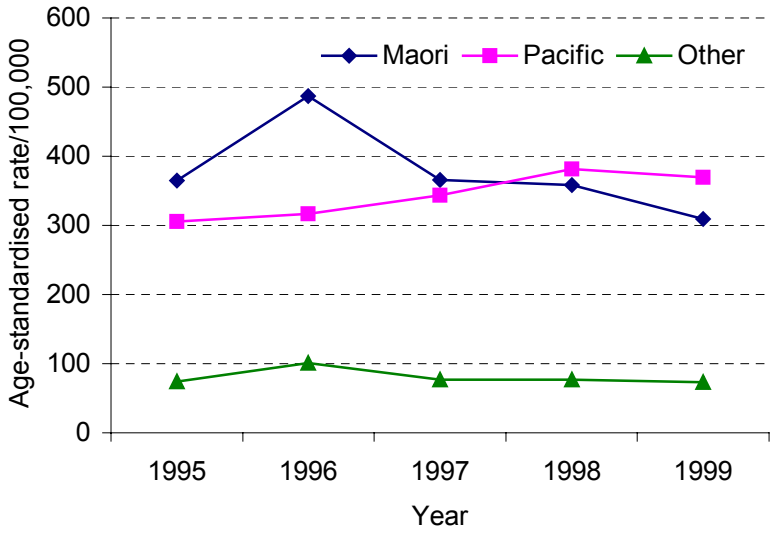


Figure 86. Age standardised rates of diabetes discharges by ethnicity for Counties Manukau residents 1995-1999



Summary - diabetes

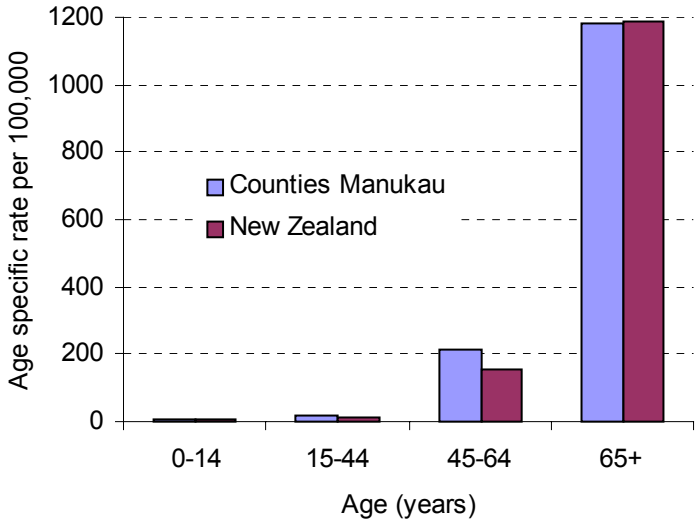
Discharge rates for diabetes have remained fairly stable since 1995. Maori and Pacific rates are significantly higher than the other ethnic group, and Counties Manukau discharge rates overall and for these ethnic groups are significantly higher than the national rate. Pacific rates appear to be on the increase. Obesity and a family history of the disease are confirmed risk factors for diabetes. Smoking, a high fat diet and lack of physical activity may also play a part. These factors may explain some of the ethnic differences seen, and are discussed further in the Lifestyle Factors section of Chapter 3 Health Inequalities from page 50.

Congestive Heart Failure (CHF)

Congestive heart failure (CHF) is a condition in which the heart is unable to maintain an adequate output of blood. This results in an over distension of certain veins and organs with blood, and an inadequate blood supply to the body tissues. Analysis here is based on discharge data where congestive heart failure is the principal diagnosis. This includes the following ICD-9 codes: 40201, 40211, 40291, 428 and 5184. Ischaemic heart disease and angina are analysed separately in the following sections.

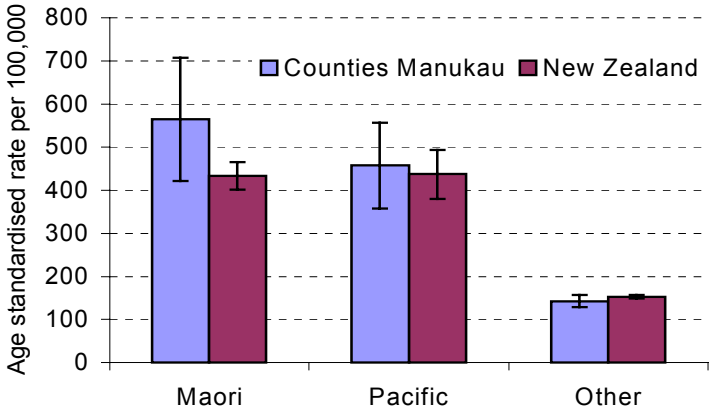
In 1999 606 Counties Manukau residents were discharged with a principal diagnosis of CHF, an age-standardised rate of 199 per 100,000 (95% CI 183-215). This is significantly higher than the national rate of 177 (173-181) per 100,000. Figure 87 shows the age-specific rate of discharges for CHF for Counties Manukau and New Zealand in 1999. CHF predominantly affects those aged over 65 years, and this is reflected in the hospitalisation rates. The Counties Manukau rate is very similar to the national rate for this age group – the excess is mainly in the 45-64 age group. The very high rates seen in the 65+ group (the equivalent of over 1% of that group being admitted each year with CHF – if each discharge were to a different person) make this an important contributor to the acute admission problems facing the hospital system.

Figure 87. Age specific rates of CHF for Counties Manukau residents and New Zealand, 1999



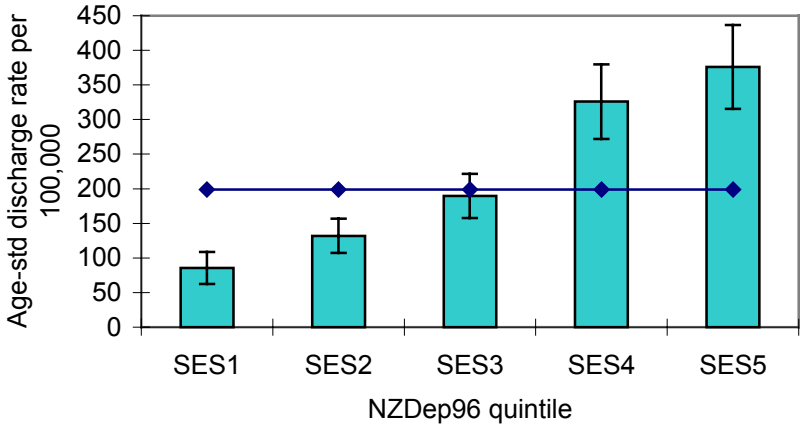
The CHF discharge rates for Maori and Pacific peoples are significantly higher than the "Other" group (Figure 88). For the Counties Manukau population, Maori rates are four times and Pacific rates are three times the rate of the "Other" group. Rates are not significantly different than the rates for all New Zealand.

Figure 88. Age-standardised rates of CHF discharges by ethnicity. Counties Manukau residents and New Zealand,1999



Congestive heart failure discharge rates increase as deprivation increases (see Figure 89) with the least deprived 40% having significantly lower rates then the average, and the most deprived 40% significantly higher than the average. Maori and Pacific discharge rates for CHF are higher than the rates for people living in the most deprived areas (SES5 in Figure 89). This may indicate some additional problems with preventive care, or access to primary care services, over and above those for others living in relatively deprived areas.

Figure 89. CHF age standardised discharge rate by deprivation level of area of domicile, Counties Manukau, 1999



Note: Age-standardised rate per 100,000 population. All ages. Vertical bars show 95% confidence intervals, horizontal line shows Counties Manukau average.

The rate of CHF discharges has increased slightly since 1995 for the Counties Manukau population, and has remained fairly stable for the New Zealand population (Figure 90). The Counties Manukau rate has always been slightly higher than the New Zealand rate, but less than the rates recorded than, for example, Northland, a comparatively deprived areas.

Both the Maori and Pacific rates have been increasing since 1995 and have been consistently higher than the "other" group (Figure 91).

Figure 90. Age-standardised rate of CHF. Counties Manukau and New Zealand, 1995-1999

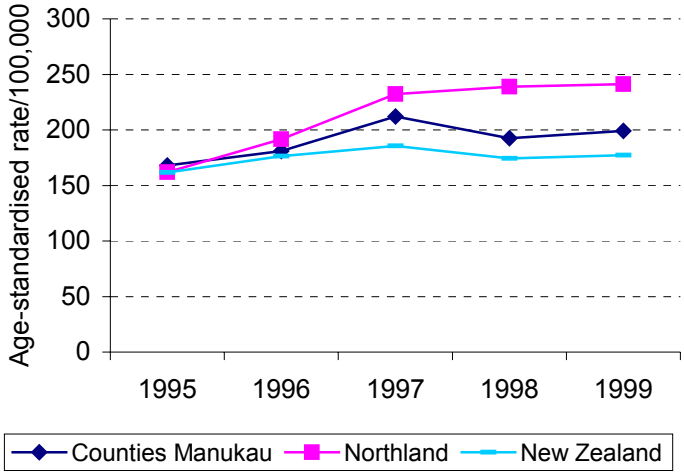
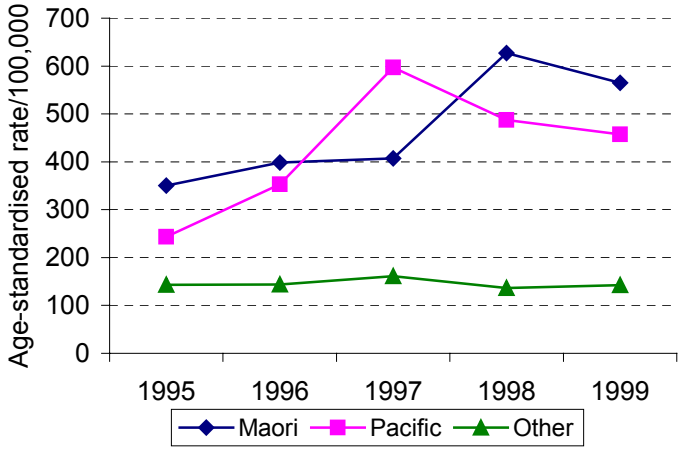


Figure 91. Age standardised rates of CHF by ethnicity for Counties Manukau residents 1995-1999



Summary - CHF

Discharge rates of congestive heart failure have increased slightly in Counties Manukau since 1995. Counties Manukau has a significantly higher discharge rate than New Zealand as a whole. The increase in Counties Manukau is due to increasing rates in the Maori and Pacific populations. Maori had the highest rate of CHF discharges in 1999. Previous work in the North Health area[2] found a strong relationship between congestive heart failure and socio-economic status, with the discharge rates for the lowest socio-economic group being six times that of the highest group. Congestive heart failure treatment requires diet control, medication, and good primary health care to avoid hospitalisation. Access to this health care and the ability to afford prescriptions may affect admission rates for this disease, and may account for part of the reason for higher rates in Maori and Pacific populations.

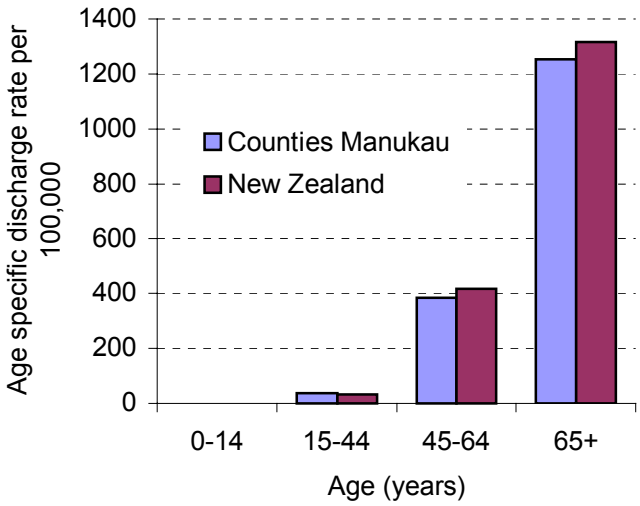
2 Jackson G, Kelsall L, Parr A, Papa D. *Socio-economic inequalities in health care*. North Health 1998

Ischaemic Heart Disease (IHD)

Ischaemic heart disease (IHD) is the leading cause of death for New Zealanders. The major modifiable risk factors are tobacco consumption, diet, physical inactivity, and the treatment of hypertension and diabetes. Socio-economic and cultural or ethnic factors are also important determinants. Analysis is based on discharge data where the primary diagnosis was either myocardial infarction, (ICD-9 code 410); athero-sclerosis, (ICD –9 code 411); or chronic ischaemic disease, (ICD–9 code 412). Angina as a cause of hospitalisation is analysed separately – see page 124.

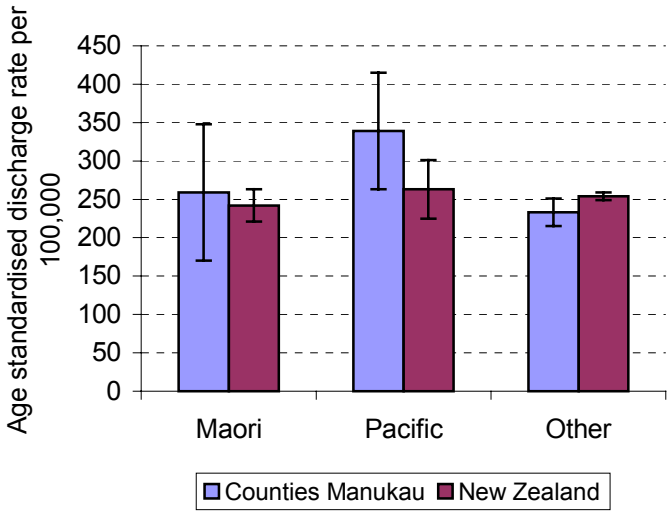
In 1999, there were 785 discharges coded as IHD for Counties Manukau residents, a rate of 248 per 100,000 (95% CI 230-265). This was lower than the rate recorded for the New Zealand population, 262 per 100,000. Figure 92 compares rates for the Counties Manukau population to the New Zealand population by age.

Figure 92. Age-specific discharge rates of IHD for Counties Manukau residents and New Zealand, 1999



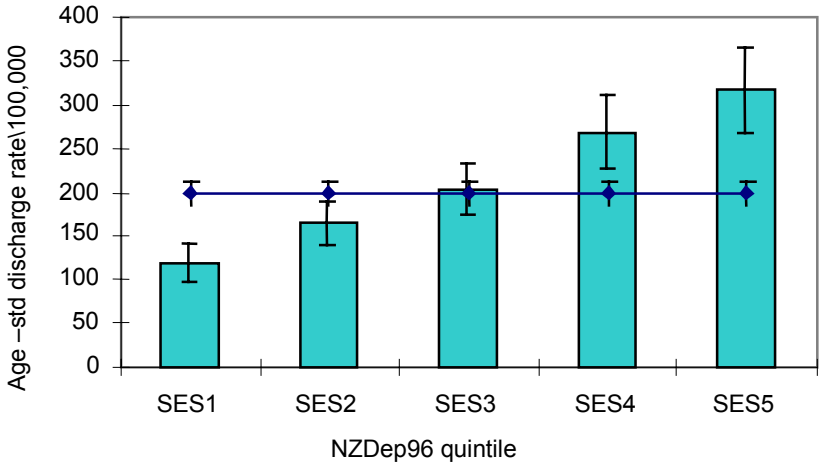
For the New Zealand population, the rates among the different ethnic groups are similar (Figure 93). For the Counties Manukau population, rates are highest in the Pacific population. The Counties Manukau Pacific rate is significantly higher than the Pacific population of New Zealand. This is a different trend than that seen with angina discharges, where the Maori rates are higher than the other ethnic groups, and the Pacific rate the lowest (see page 124).

Figure 93. Age-standardised rate of IHD discharges by ethnicity for Counties Manukau residents and New Zealand, 1999



Taking discharge rates by area of deprivation the most deprived have the highest discharge rates and there is a clear linear relationship between discharge rates NZDep96 quintile (Figure 94). The rate of admission for Pacific people is similar to that of people living in the most deprived areas whatever their ethnic background.

Figure 94. IHD age standardised discharge rate by deprivation level of area of domicile, Counties Manukau, 1999



Note: Age-standardised rate per 100,000 population. All ages. Vertical bars show 95% confidence intervals, horizontal line shows Counties Manukau average (complete with confidence intervals).

Figure 95 shows the IHD discharge rate for the Counties Manukau and New Zealand population for the years 1995 to 1999. Rates of IHD have decreased over this period, for both Counties Manukau and New Zealand. This is also opposite to the trend seen for angina. Despite a general decline in rates since 1995 for the Counties Manukau population, Figure 96 shows that this decline is due to lower rates mainly in the "other" population. The Counties Manukau Pacific population, who had the lowest IHD discharge rates in 1995, has had increasing rates since 1996 and now have the highest rates of all ethnic groups.

Figure 95. Age-standardised rate of IHD discharges, Counties Manukau and New Zealand, 1995-1999.

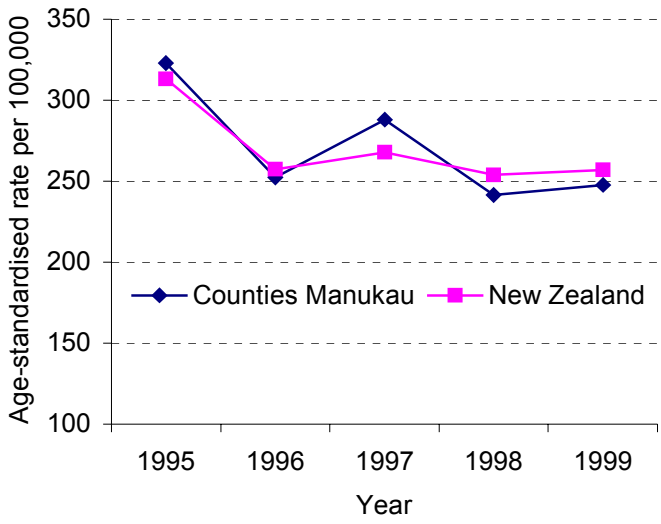
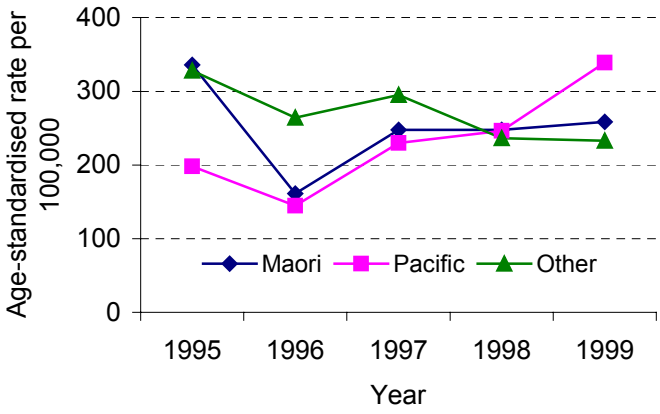


Figure 96. Age standardised rates of IHD discharges by ethnicity for Counties Manukau residents 1995-1999



Summary - IHD

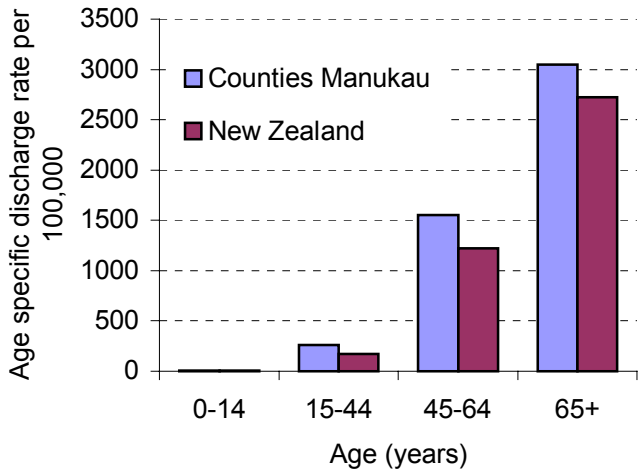
Since 1995, ischaemic heart disease rates have decreased both in New Zealand and as a whole in Counties Manukau. However, the Pacific population of Counties Manukau are an exception to this trend, the rates for this population have increased rapidly since 1996. The rates of the Pacific peoples are similar to those who living in the most deprived areas of Counties Manukau of all ethnicities. Investigation of this increase, and action on risk factors – smoking, obesity, diet, exercise, diabetes and high blood pressure - is urgently needed.

Angina

Angina is an attack of chest pain resulting from myocardial ischaemia. This ischaemia secondary to coronary atherosclerosis is more common in adults, especially the elderly who have high blood lipids, diabetes mellitus, hypertension, obesity, or who smoke cigarettes. Discharges where the principal diagnosis was angina, ICD-9-CM: 4111 (intermediate coronary disease), 4118 (unspecified coronary insufficiency) and 413 (angina) were used for the following analysis[3]. Angina has been separated from ischaemic heart disease as particularly for hospital discharges it can be conceptualised as a primary care access/use issue as much as a primary prevention issue (where IHD firmly sits).

In 1999, there were 2696 angina discharges recorded for Counties Manukau residents, an age-standardised rate of 810 per 100,000 (95% CI 780-841). This rate is higher than anywhere in New Zealand, and significantly higher than the total New Zealand rate of 653 per 100,000 (645-661). Counties Manukau rates are higher than the New Zealand population for all age groups (Figure 97). More work needs to be done to examine the reasons for this, particularly around access to primary care and the interactions between primary care and secondary care. It is also worth noting that initiatives within SAH to improve care for angina patients (eg the chest pain pathway) may have served to improve the accuracy of coding for angina – ie less coded as chest pain (ie not determined whether cardiac in origin or not). This may have contributed but will not have caused all the increase.

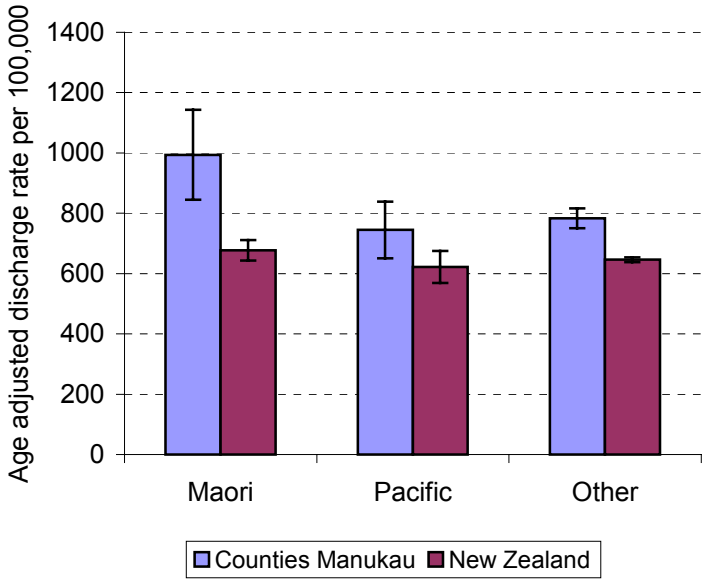
Figure 97. Angina age-specific discharge rates for Counties Manukau residents and New Zealand, 1999



For New Zealand as a whole, the ethnic groups had similar discharge rates in 1999, with slightly higher rates found in the Maori population (Figure 98). In Counties Manukau, Maori rates were significantly higher than the other ethnic groups. Counties Manukau angina hospitalisation rates are higher than the national figures for all ethnic groups.

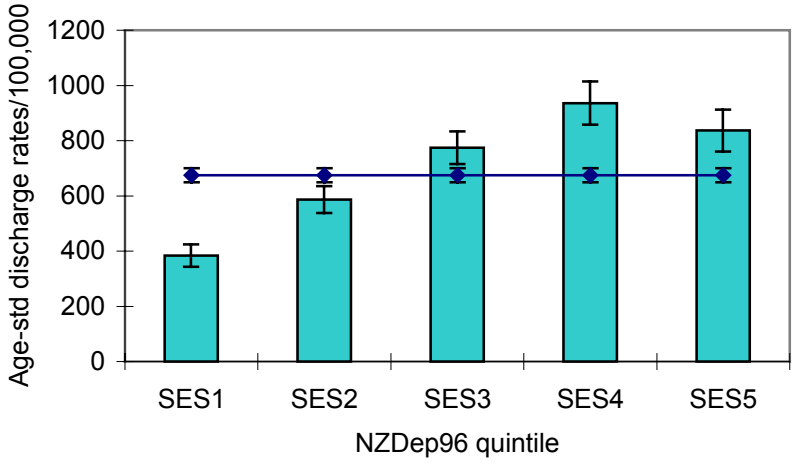
3 This differs from the category of angina used in the PAH analysis (Chapter 2 page 28) which also includes chest pain (ie where a heart-related diagnosis was not made)

Figure 98. Age-standardised rate of angina discharges by ethnicity for Counties Manukau residents and New Zealand, 1999



The 40% of the Counties Manukau population living in the least deprived areas have lower discharge rates for angina than the average for Counties Manukau, as might be expected from the IHD figures above. The 40% living in the most deprived areas are also significantly higher as would be expected. What was not expected is the fall from SES4 to SES5, which is quite different than the pattern seen for IHD. Either the most deprived people have more rapid progression or severe disease, or equally worryingly, they are not seeking medical attention for their chest pain symptoms. The discrepancy is particularly noticeable for Pacific people.

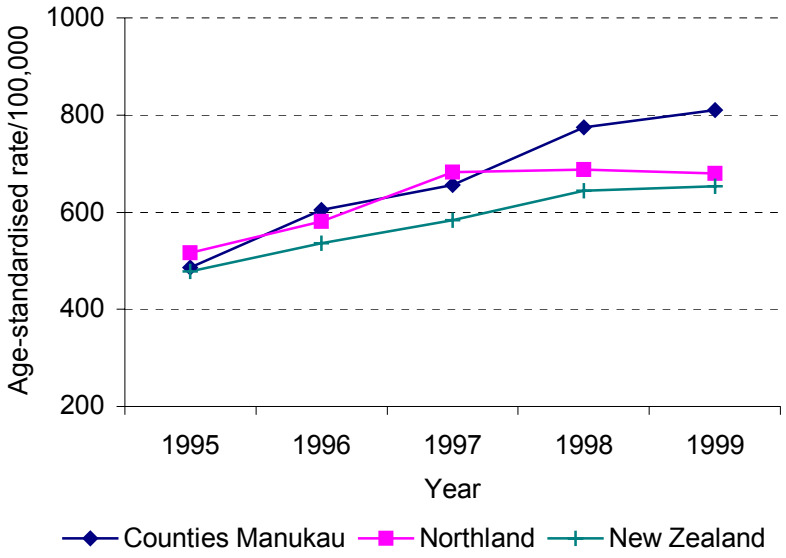
Figure 99. Angina age standardised discharge rate by deprivation level of area of domicile, Counties Manukau, 1999



Note: Age-standardised rate per 100,000 population. All ages. Vertical bars show 95% confidence intervals, horizontal line shows Counties Manukau average (complete with confidence intervals).

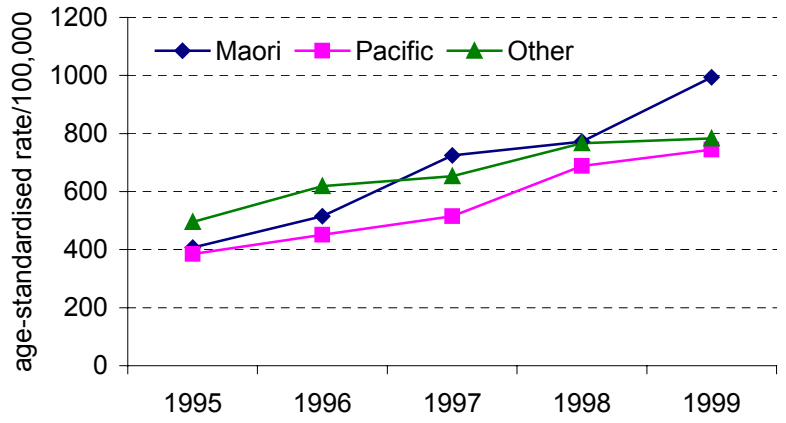
Angina discharge rates have increased since 1995, both for Counties Manukau and for New Zealand. The Counties Manukau rate has increased at a faster pace, and since 1998 has also been higher than any other area in New Zealand - Northland, an area with a large Maori population, is shown as a comparison (Figure 100).

Figure 100. Age-standardised rate of angina discharges, Counties Manukau and New Zealand, 1995-1999



For all ethnic groups, the angina discharge rates have increased markedly since 1995 (Figure 101). The Maori population has had the greatest increase in rates, more than doubling from 407 per 100,000 in 1995 to 994 per 100,000 in 1999. In 1995 the "other" group had higher rates than either the Maori or Pacific population. This trend has reversed with Maori and Pacific rates now higher than the "other" group.

Figure 101. Age standardised rates of angina discharges by ethnicity for Counties Manukau residents 1995-1999



Summary - angina

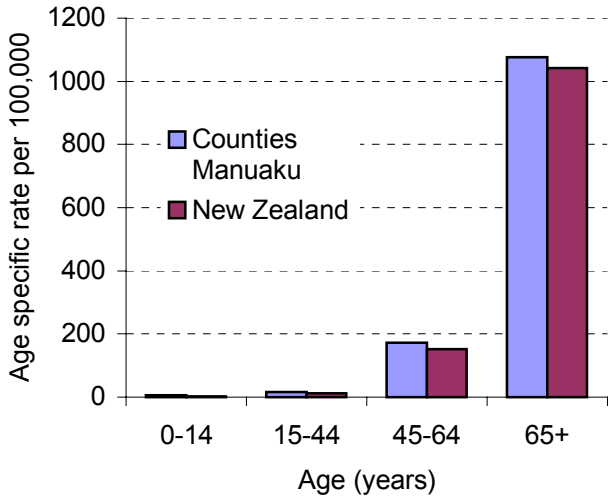
The rate of angina discharges has been increasing nationally and regionally since 1995. Counties Manukau rates are much higher than the rest of New Zealand. All ethnic groups, but particularly the Maori population, have increased their rates since 1995. The Maori population have the highest rates of all ethnic groups and a higher rate than the most deprived people. The Counties Manukau Maori rate is significantly higher than the Maori population of New Zealand. The most deprived 20%, and particularly Pacific people may not be adequately accessing health care services for chest pain and angina.

Cerebrovascular Disease (Stroke)

Stroke is the third-ranked cause of death in New Zealand after ischaemic heart disease and cancer, and a leading cause of hospital admission and long-term disability in most of the developed world. Stroke is defined by the World Health Organisation as a condition characterised by rapidly developing symptoms and signs of focal brain lesion, with symptoms lasting for more than 24 hours or leading to death. Transient ischaemic attacks (TIAs), where symptoms last less than 24 hours, are not included in the definition of stroke, and are not included in the following statistics. Stroke encompasses two major categories, ischaemic stroke (which includes embolic and thrombotic subtypes) and haemorrhagic stroke (which includes subarachnoid and intracerebral subtypes). No differentiation between these is made in the analysis that follows. Data for this analysis came from discharge data from public hospitals where the principal diagnosis was cerebrovascular disease, ICD-9-CM: 430-438.

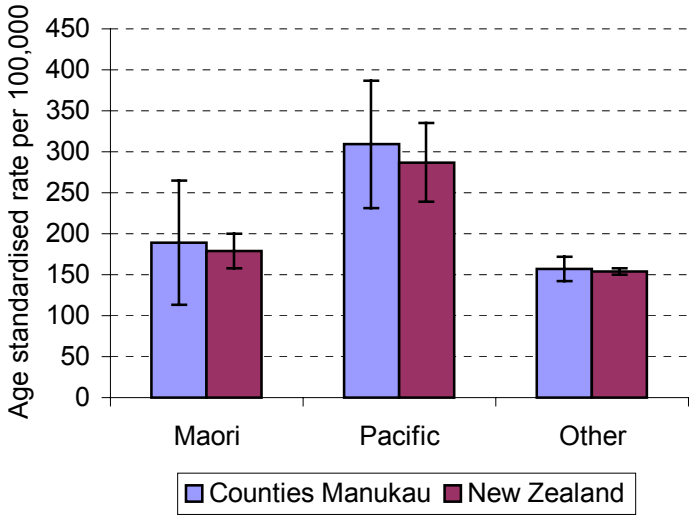
In 1999, there were 532 discharges for stroke for Counties Manukau residents, a rate of 174 per 100,000 (95% CI 159-189). This is slightly higher than the national rate of 160 (156-164) per 100,000. Stroke predominantly affects those aged over 65 years (Figure 102). The Counties Manukau age-specific rates are similar to the national rates.

Figure 102. Age-specific rates of stroke discharges for Counties Manukau residents and New Zealand, 1999



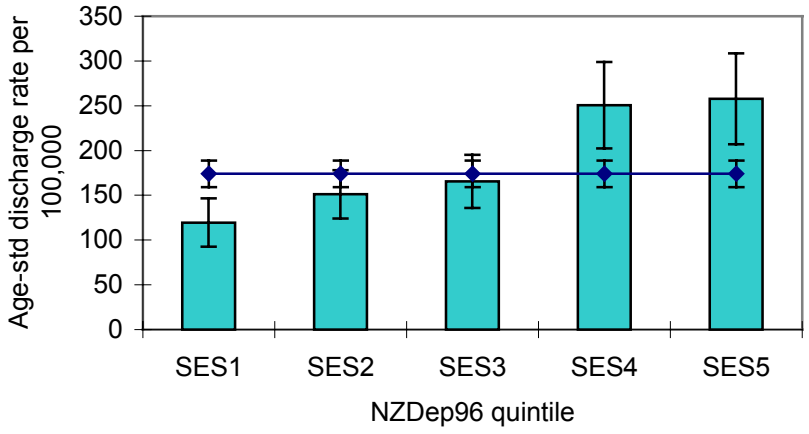
Counties Manukau Pacific stroke discharge rates are higher than the Maori and significantly higher than the Other ethnic group (Figure 103). The Maori rate is similar to the rate found in the other ethnic group. The Counties Manukau Pacific rate is slightly higher than the national rate, while the Maori and Other ethnic groups have similar rates to their New Zealand counterparts. It is interesting to compare the relative hospitalisation rate for Maori in Counties Manukau with the mortality rate (Table 14 page 26). Counties Manukau Maori have a similar stroke mortality rate to the European and Other group, in stark contrast to the doubled risk of New Zealand Maori as a whole. One reason for this might be a might be a migration of post-stroke Maori elderly to their original home town/tribal area to be with close family. This would artificially lower the CM rate while raising the "ancestral" home rates.

Figure 103. Age-standardised rates of stroke discharges by ethnicity. Counties Manukau residents and New Zealand, 1999



Cerebrovascular disease discharge rates increase as area of deprivation increases (see Figure 104) with the 20% living in the least deprived areas having significantly lower rates then the average, and the most deprived 40% significantly higher than the average. Maori discharge rates for cerebrovascular disease are lower than the rates for the most deprived groups (SES4 and SES5) but the Pacific rates are higher.

Figure 104. Cerebrovascular disease age standardised discharge rate by deprivation level of area of domicile, Counties Manukau, 1999



Note: Age-standardised rate per 100,000 population. All ages. Vertical bars show 95% confidence intervals, horizontal line shows Counties Manukau average (complete with confidence intervals).

Figure 105 shows the stroke discharge rates from 1995 to 1999 for the Counties Manukau and total New Zealand populations. Rates for both populations have remained similar and constant over the years. Other areas in New Zealand have had higher rates - eg the Waikato rate has been higher than Counties Manukau since 1996. Pacific rates have been consistently higher than the other ethnic groups from 1995 to 1999 (Figure 106).

Figure 105. Age-standardised rates of stroke discharges, Counties Manukau and New Zealand, 1995-1999

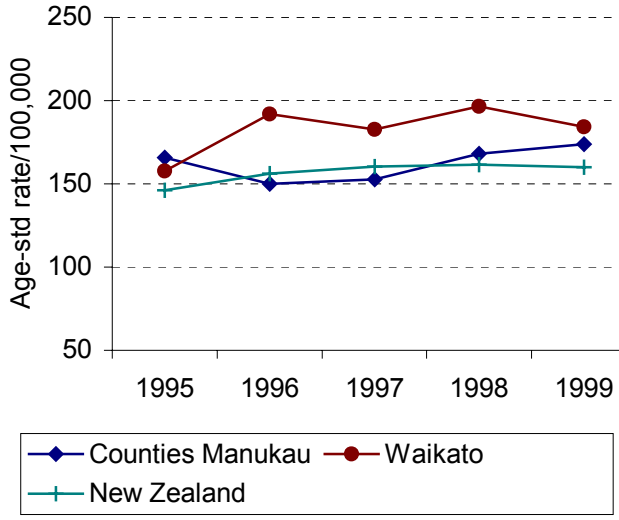
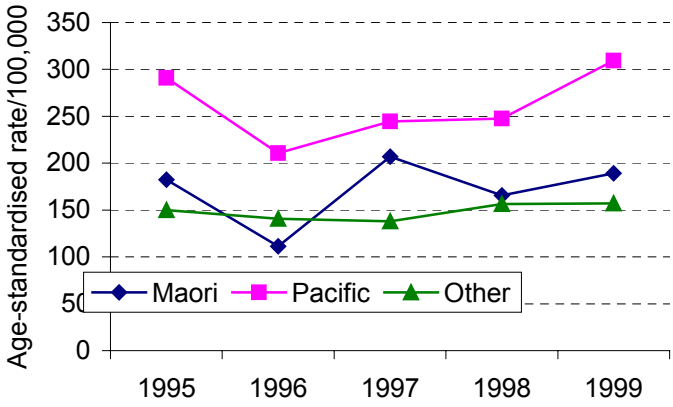


Figure 106. Age standardised rates of stroke discharges by ethnicity for Counties Manukau residents 1995-1999



Summary – cerebrovascular disease

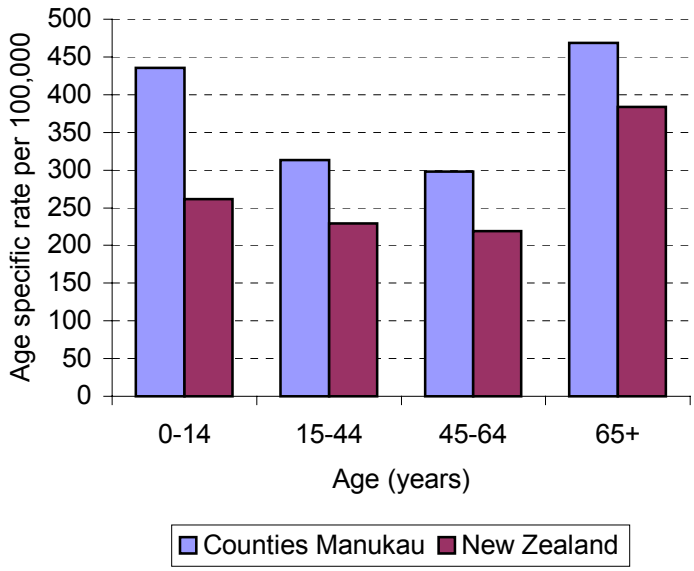
The stroke discharge rate in Counties Manukau has remained fairly stable over the last five years, and is very similar to the national rate. Pacific people appear to be at increased risk of this disease. The most common form of stroke in western industrialised countries is atherosclerotic brain infarction caused by atherosclerosis. Hypertension, smoking, obesity and diabetes are important risk factors and would be the main candidates for reasons for the higher rates in the Pacific population.

Cellulitis

Cellulitis as used here covers a range of skin infections including carbuncles, furuncles, abscesses, acute lymphadenitis and pyoderma as well as cellulitis per se. Risk factors include insect bites and stings, animal and human bites, injury or trauma resulting in a break in the skin, peripheral vascular disease, diabetes, smoking, poor diet and obesity. The ICD –9- codes used for analysis were 681-683, 686.

In 1999 there were 1382 discharges for cellulitis for Counties Manukau residents, a rate of 355 per 100,000 (95% CI 337-374). This is substantially higher than the rate for the total New Zealand population, 253 per 100,000 (247-258). Counties Manukau rates are significantly higher than the national rates for all age groups (Figure 107).

Figure 107. Age-specific rates of cellulitis for Counties Manukau residents and New Zealand, 1999



For both the New Zealand and Counties Manukau populations, the Pacific rate is higher than the other two groups (Figure 108). The Maori rate is higher than the "other" group. In Counties Manukau, the Maori rate is almost double, and the Pacific rate is almost three times that of the "other" group. For all ethnic groups, the Counties Manukau rates are higher than those found nationally.

Cellulitis discharge rates increase as area of deprivation increases (see Figure 109). The 40% of people living in the least deprived areas having significantly lower rates then the average, and the 40% of people living in the most deprived areas having significantly higher than the average. Maori discharge rates for cellulitis are lower than the rates for the most deprived groups (SES4 and SES5) but the Pacific rates are higher. Access to primary care and the cost of pharmaceuticals to treat common skin conditions:

head lice/"nits" (treatment shampoos are unsubsidied)
eczema (emollients are partly or unsubsidised)
staphylococcus infections/"school sores" (part charges on antibiotics)

may well be causative factors, as will hygiene difficulties in overcrowded homes (see page 14).

Figure 108. Age-standardised rate of cellulitis discharges by ethnicity Counties Manukau residents and New Zealand, 1999

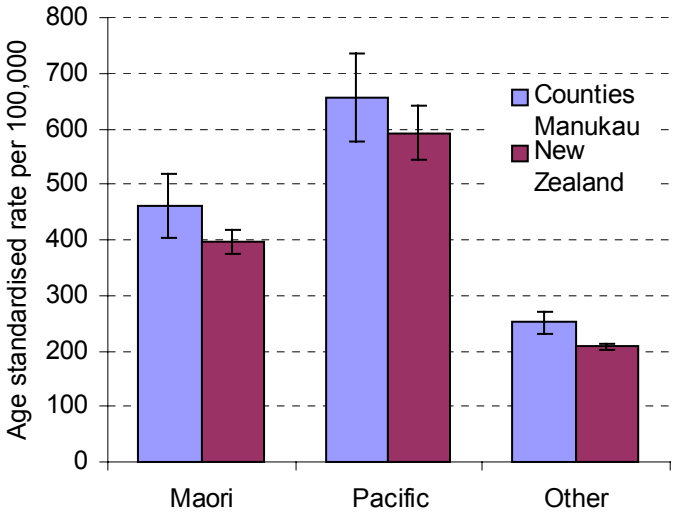
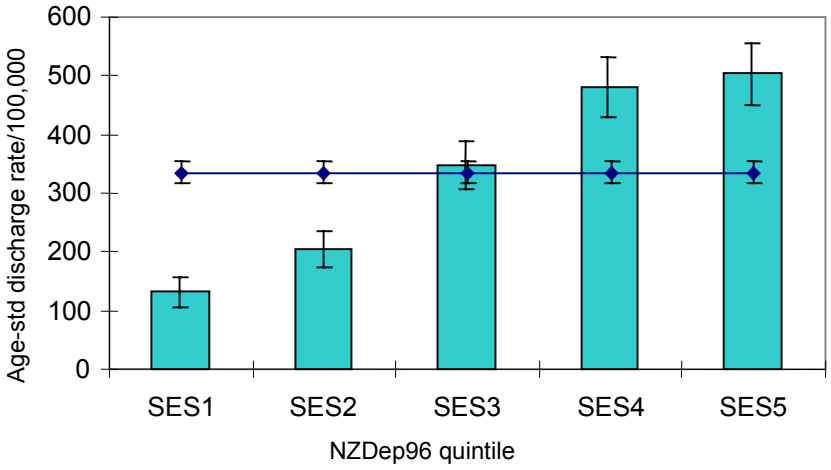


Figure 109. Cellulitis age standardised discharge rate by deprivation level of area of domicile, Counties Manukau, 1999



Note: Age-standardised rate per 100,000 population. All ages. Vertical bars show 95% confidence intervals, horizontal line shows Counties Manukau average (complete with confidence intervals).

The cellulitis discharge rate has increased since 1995 for both Counties Manukau and New Zealand populations. The Counties Manukau rate has been consistently higher than the New Zealand rate for all these years, with only relatively deprived Northland having similar rates. Figure 110 shows that this increase in discharges for the Counties Manukau population is due to an increase in discharges for all ethnic groups, but particularly in the Pacific population. Their rate has almost doubled over this time period from 350 per 100,000 in 1995 to 656 per 100,000 in 1999.

Figure 110. Age-standardised rate of cellulitis discharges, Counties Manukau and New Zealand, 1995-1999

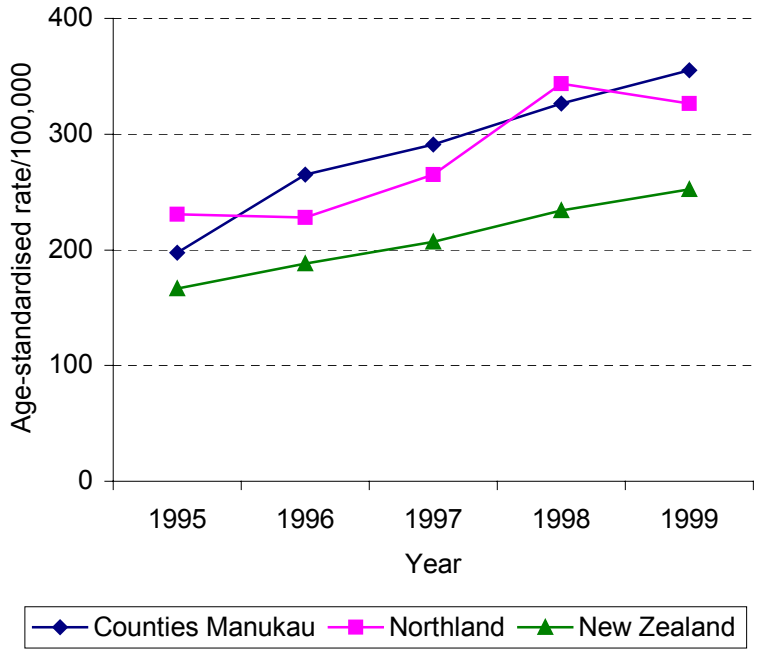
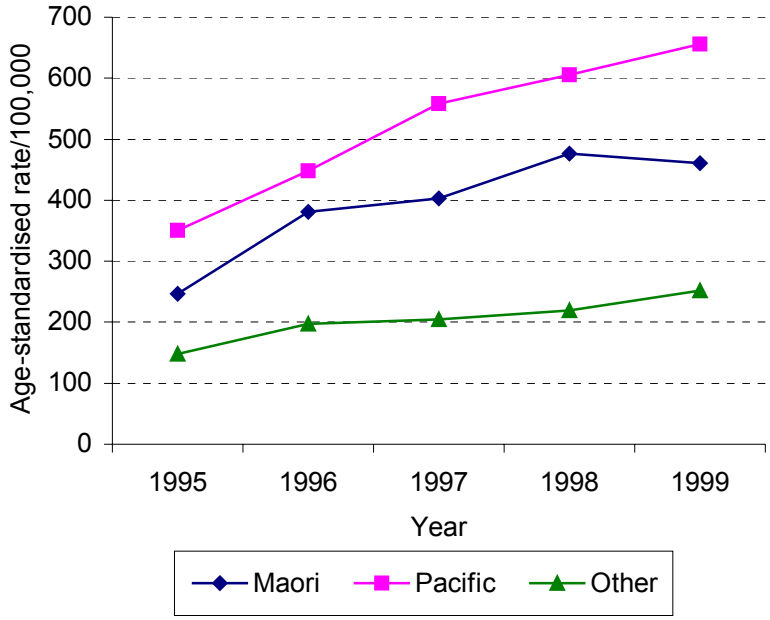


Figure 111. Age standardised rates of cellulitis discharges by ethnicity for Counties Manukau residents 1995-1999.



Summary - cellulitis

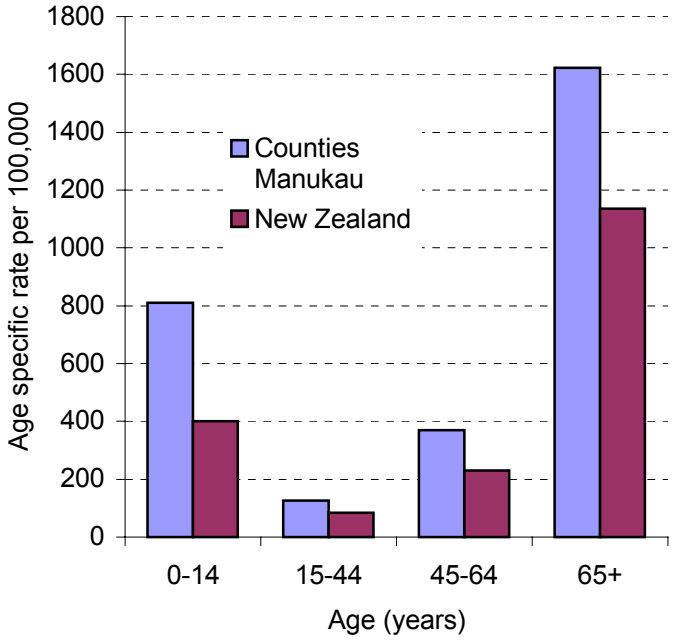
Counties Manukau residents have a substantially higher hospitalisation rate for cellulitis than the rest of New Zealand. Since 1995, cellulitis rates have increased in the Counties Manukau population. This trend is also apparent in the total New Zealand population but rates are significantly higher in Counties Manukau. The Pacific and Maori populations have higher rates than the other ethnic group. The Maori rate is lower than the least deprived people but the Pacific peoples rate is higher. All ethnic groups in Counties Manukau have increased their rates of cellulitis discharges since 1995, but the Pacific rate has increased the most dramatically. The higher rates of diabetes in Pacific and Maori population explain some but not all of the socio-economic difference. The relationship between cellulitis and primary care access and use also needs exploration to determine the influence of these factors on the ethnic and socio-economic differentials.

Pneumonia

Pneumonia is an infection of the pulmonary parenchyma, here confined to those from bacterial origins (ie viral pneumonia is excluded). The analysis is based on in-patient discharges with the principal diagnosis of pneumonia, ICD-9-CM: 481, 4822, 4823, 4829, 483, 485 and 486. Many pneumonia cases can be (and are) treated in primary care. The distinction between cases that warrant community treatment and cases that warrant hospital treatment are far from clear – differences over time in discharge rates may relate as much to primary care changes as disease prevalence per se.

In 1999 there were 1883 discharges for pneumonia for Counties Manukau residents, a rate of 508 per 100,000 (95% CI 485-531). This is significantly higher than the rate for the total New Zealand population of 310 per 100,000 (304-315). Pneumonia is a disease of the very old and the very young. Counties Manukau rates are significantly higher than the national rates for all age groups (Figure 112).

Figure 112. Age-specific rates of pneumonia discharges for Counties Manukau residents and New Zealand, 1999



Maori and Pacific rates are higher than those found for the "other" group. In Counties Manukau the Maori rate is over three times higher, and the Pacific rate is four times higher than the "other" group. For all ethnic groups, the Counties Manukau rate is higher than that found nationally.

Pneumonia is also associated with area of deprivation, like all other infections (Figure 114). Here there may be an additional overlay – it may be that relatively wealthier people are more likely to be able to afford more complex or involved primary care treatment and thus avoid hospital admission. Pneumonia discharges for Maori and Pacific people are still higher than the most deprived groups, implying a strong ethnic component to the higher rates.

Figure 113. Age-standardised rate of pneumonia discharges by ethnicity. Counties Manukau residents and New Zealand, 1999

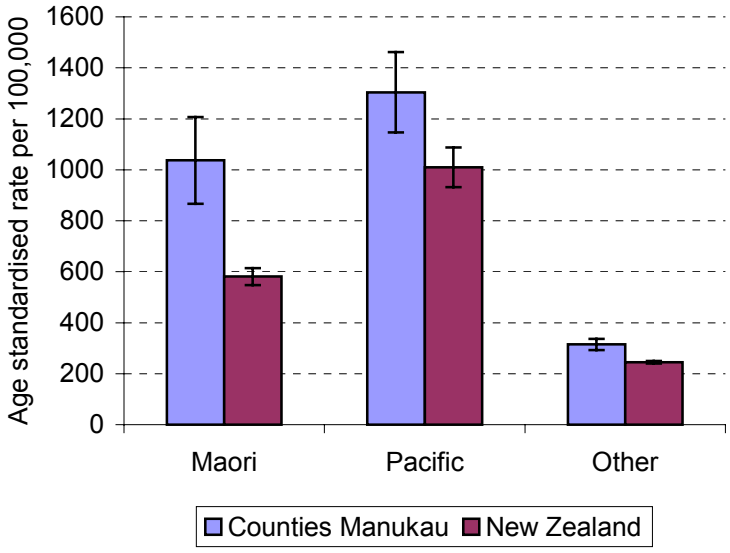
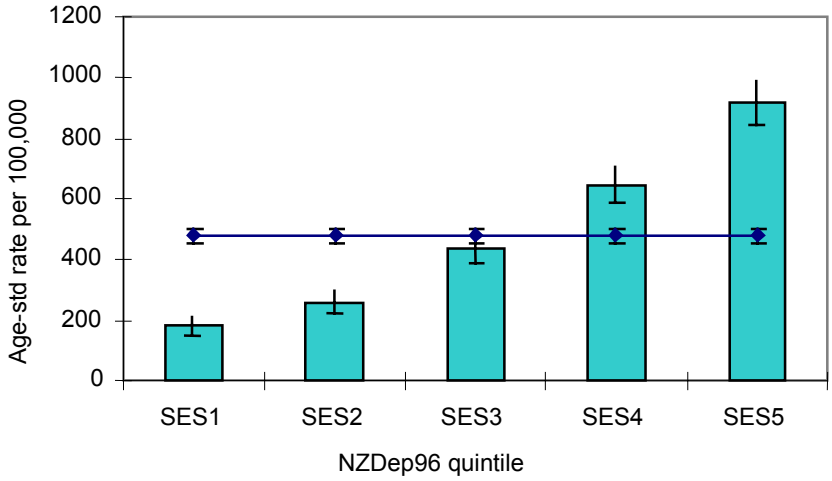


Figure 114. Pneumonia age standardised discharge rate by deprivation level of area of domicile, Counties Manukau, 1999



Note: Age-standardised rate per 100,000 population. All ages. Vertical bars show 95% confidence intervals, horizontal line shows Counties Manukau average (complete with confidence intervals).

The Counties Manukau rate increased from 1995 to 1998 in a similar pattern to that seen for the total New Zealand population, although the Counties Manukau rates have been consistently higher (Figure 115). In 1999, Counties Manukau had a dramatic increase in discharges for pneumonia. Figure 116 shows that this increase in 1999 was due to rapid increases in the discharge rates for the Maori and Pacific populations of Counties Manukau. The reasons for this are unclear. Prior to 1999 relatively deprived Northland had higher rates than Counties Manukau.

Figure 115. Age-standardised rate of pneumonia discharges, Counties Manukau and New Zealand, 1995-1999

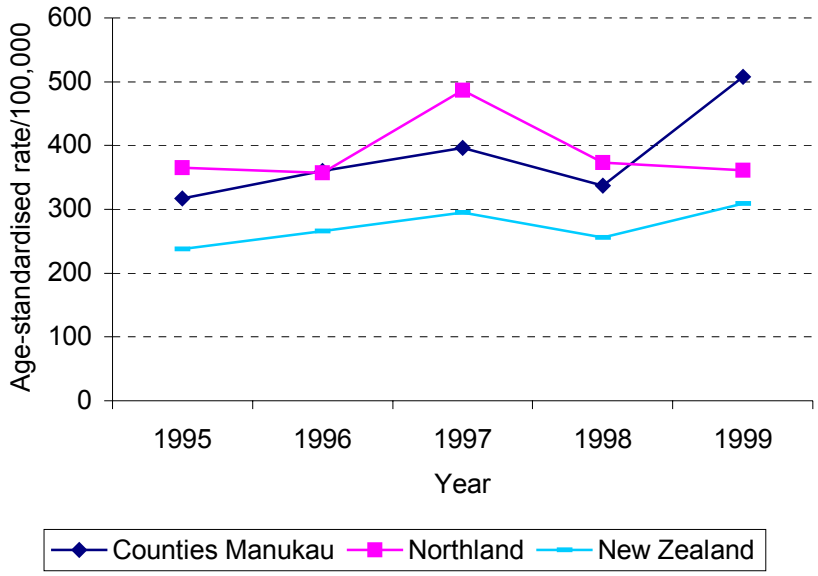
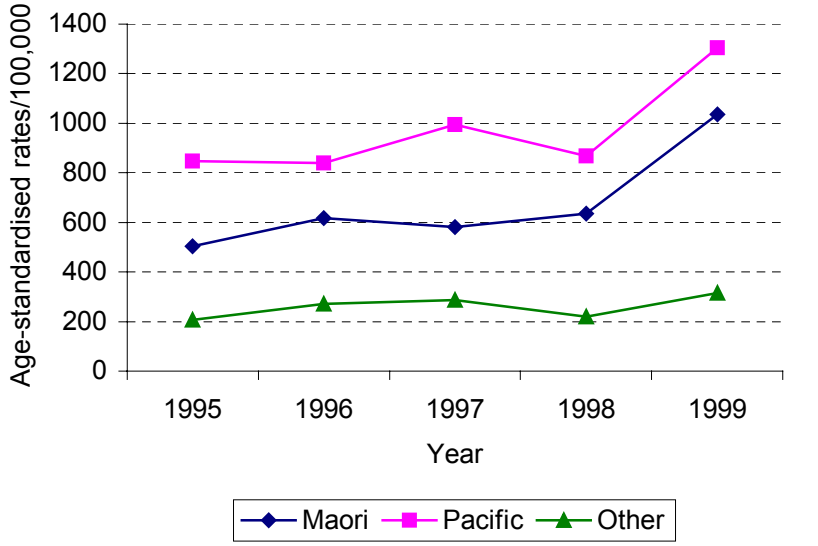


Figure 116. Age standardised rates of pneumonia discharges by ethnicity for Counties Manukau residents 1995-1999.



Summary - pneumonia

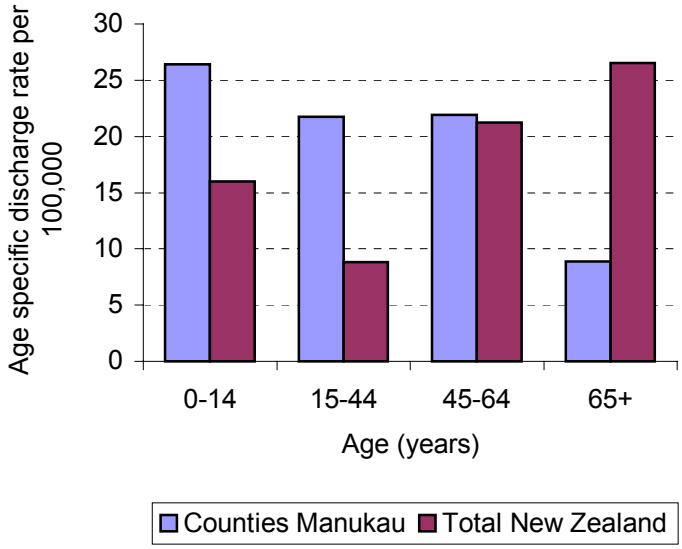
Pneumonia is primarily a disease of the very old and very young. Maori and Pacific populations have significantly higher rates than the "other" group, and those who live in the areas most deprived have significantly higher rates than those in the least deprived areas. Counties Manukau has substantially higher rates than those recorded nationally, especially in the 0-14 year age group. These findings reflect in part the lower socio-economic status of the Counties Manukau area. It is likely that poor housing, dampness and overcrowding are contributing to the higher rates found.

Rheumatic fever and rheumatic heart disease

Rheumatic fever is a consequence of a bacterial infection (group A streptococcal infection), usually of the throat. It is an illness that presents as arthritis and carditis. Acute rheumatic fever is rarely fatal. However, repeated attacks of rheumatic fever can cause chronic rheumatic heart disease, particularly affecting the aortic and mitral valves, which may lead to premature death. Hospital discharge data for acute rheumatic fever (ICD–9-CM codes 390-392) and chronic rheumatic heart disease (ICD-9-CM code 393) were combined for the following analysis.

In 1999 85 Counties Manukau residents were discharged with a diagnosis of rheumatic fever or rheumatic heart disease, a rate of 21 per 100,000 (95% CI 17-26). This compares to a rate of 15 per 100,000 (14-16) for the total New Zealand population. Figure 117 shows the rate of discharges for rheumatic fever and heart disease for Counties Manukau and New Zealand in 1999. There were only 3 cases in the 65+ population in Counties Manukau so little should be read into that rate, of more concern are the relatively high rates in the younger age groups.

Figure 117. Age-specific rates of rheumatic fever and rheumatic heart disease for Counties Manukau residents and New Zealand, 1999.



Pacific and Maori age-standardised discharge rates are significantly higher than the "other" group (Figure 118). For Counties Manukau residents, the Maori population has almost seven times, and the Pacific population 13 times, the rate of the other ethnic group. Counties Manukau Pacific rates are higher than the national figures, while the rates for Maori and "other" are lower. Area of deprivation analyses are not shown – virtually all cases live in NZDep96 quintiles 4 and 5.

The rates of rheumatic fever and rheumatic heart disease have decreased slightly since 1995 in New Zealand (Figure 119). Counties Manukau rates are higher than the New Zealand rate, but have decreased since 1997.

Figure 120 shows that for all ethnic groups, the rates of this disease in Counties Manukau have decreased since 1995. However, the Pacific population have not had as dramatic a decrease as the other ethnic groups, suggesting a need for further initiatives to reduce rates in this ethnic group.

Figure 118. Age-adjusted discharge rate, rheumatic fever and heart disease by ethnicity for Counties Manukau residents and New Zealand, 1999.

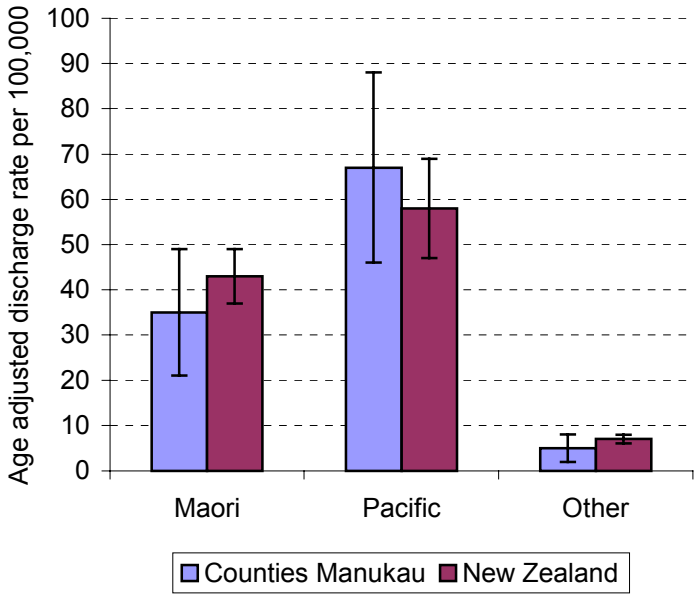


Figure 119. Age-standardised rate of rheumatic fever and rheumatic heart disease Counties Manukau and New Zealand, 1995-1999.

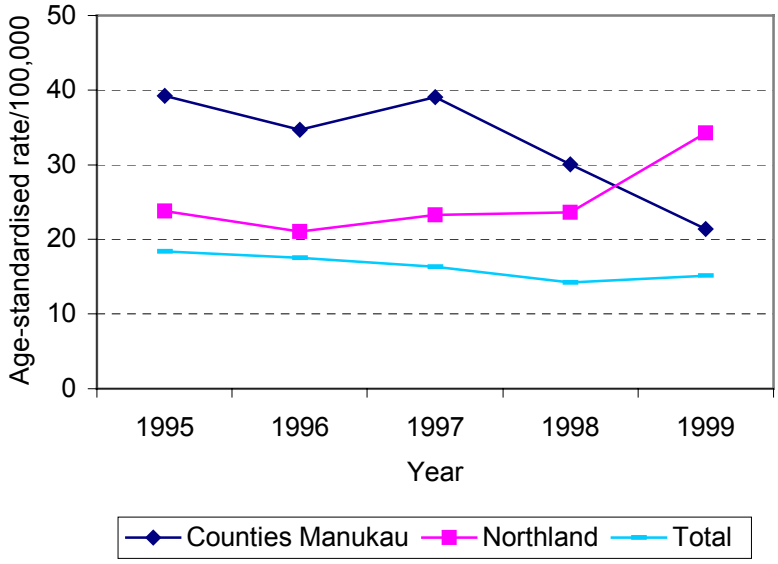
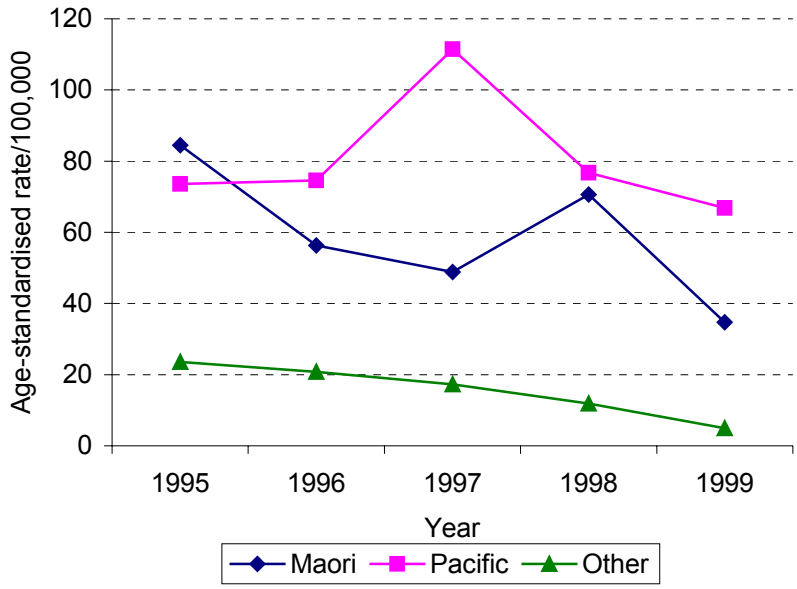


Figure 120. Age standardised rates of rheumatic fever and rheumatic heart disease by ethnicity for Counties Manukau residents 1995-1999



Summary - rheumatic fever and rheumatic heart disease

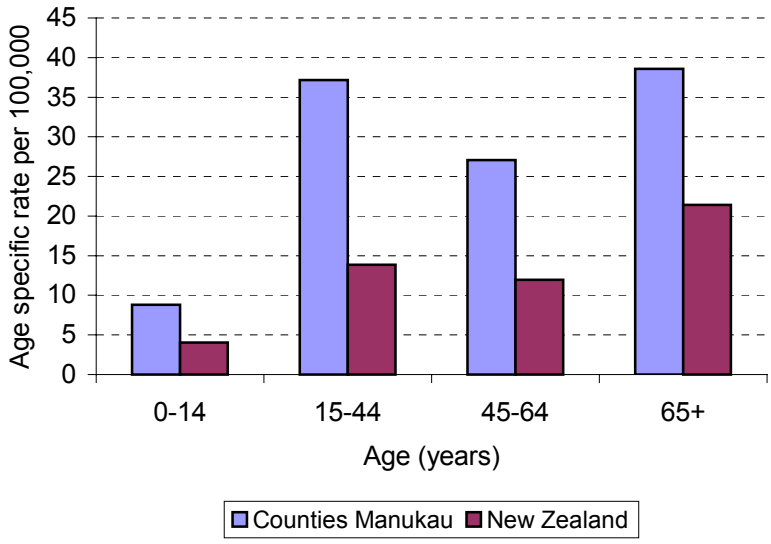
In 1999 the Counties Manukau discharge rate of rheumatic fever and rheumatic heart disease was significantly higher than the New Zealand total. However, since 1997 rates for Counties Manukau have decreased. The reasons behind this may relate to a number of interventions undertaken in the Counties Manukau area, where children received regular throat swabs in order to diagnose the disease early. Rheumatic fever and rheumatic heart disease are primarily a Maori and Pacific disease in Counties Manukau.

Tuberculosis

Tuberculosis is a chronic bacterial infection caused by *Mycobacterium tuberculosis.* This organism is transmitted from person-to-person via the respiratory route. The usual site of the disease is the lungs, but other organs may be involved. Tuberculosis has declined in developed countries as standards of living have improved and anti-tuberculous drugs have become available. However, since 1988, the incidence of tuberculosis has increased by about 5% each year in New Zealand.[4] The ICD-9-codes used for analysis were 010-018.

In 1999 108 Counties Manukau residents were discharged from hospital with a principal diagnosis of tuberculosis, a rate of 28 per 100,000 (95% CI 23-34). Although this rate is low, it is significant because it is considerably higher than the national rate of 12 per 100,000 (11-13). Tuberculosis affects all age groups - Counties Manukau rates are higher than the national rates for all age groups compared (Figure 121).

Figure 121. Age-specific rates of tuberculosis discharges for Counties Manukau residents and New Zealand, 1999



Tuberculosis discharge rates for Pacific people are the highest of the ethnic groups compared (Figure 121). High rates of tuberculosis in the past on the various Pacific Islands, coupled with overcrowding and low socio-economic status will be driving these rates. Maori rates are non-significantly higher than the Other ethnic group. For Counties Manukau residents, the Pacific rate is almost three times higher, and the Maori rate is almost double that of the other ethnic group. When compared to national data the Counties Manukau Other population have significantly higher rates than found nationally. This may be explained in part by the high number of refugees among its population who would be included in the other ethnic group.

The 40% of Counties Manukau people living in the least deprived areas (SES1 and SES2 in Figure 123) have significantly lower rates of tuberculosis than the Counties Manukau average. The 20% in the most deprived areas (SES5) have a significantly higher rate. The SES5 rate is higher than either the Maori rate or the Pacific rate, implying deprivation is a major determinant of tuberculosis infection.

[4] Harrison A, Calder L. New guidelines for tuberculosis control in New Zealand. *NZ Pub Hlth Rep* 1996, 3: 91-93

Figure 122. Age-standardised rates of tuberculosis discharges by ethnicity. Counties Manukau residents and New Zealand, 1999

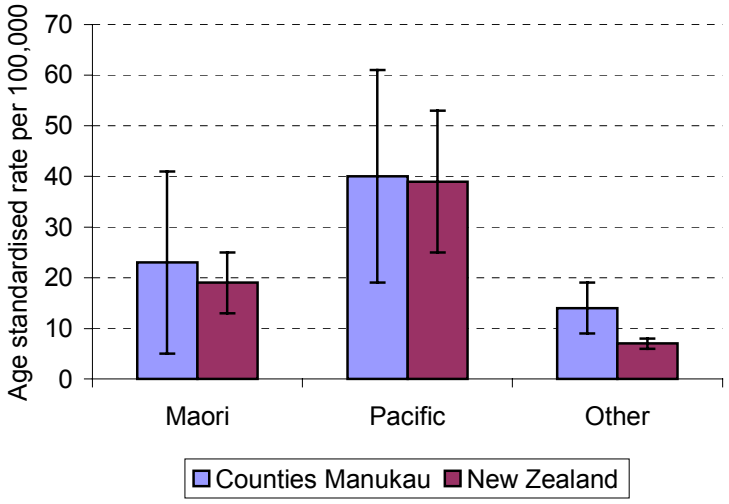
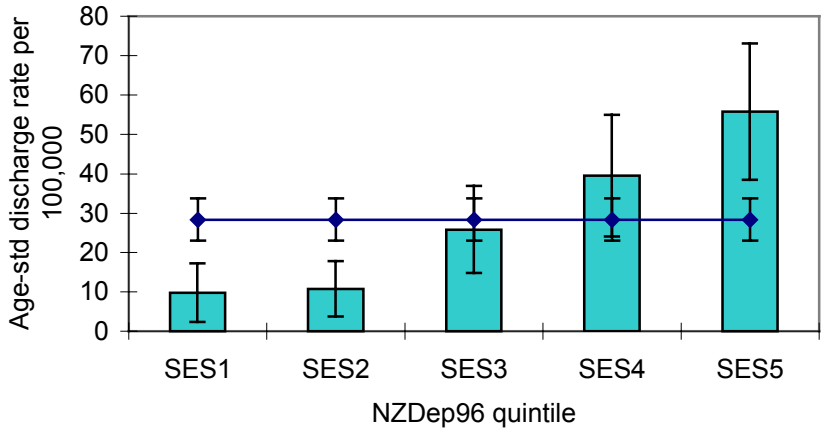


Figure 123. Tuberculosis age standardised discharge rate by deprivation level of area of domicile, Counties Manukau, 1999



Note: Age-standardised rate per 100,000 population. All ages. Vertical bars show 95% confidence intervals, horizontal line shows Counties Manukau average (complete with confidence intervals).

Although low numbers are involved, it appears that there has been a slight increase in rates for the Counties Manukau population over the past five years, whereas the New Zealand population has remained very stable (not shown). There was a peak in 1998 for the Pacific population due to an outbreak in a church and a number of schools in the Counties Manukau area. Maori and Pacific rates have been consistently higher than the rates of the other ethnic group from 1995-99.

Summary - tuberculosis

Counties Manukau has considerably higher rates of tuberculosis hospitalisations than found nationally in all age groups. Maori and Pacific rates are significantly higher than the other ethnic group, but not as high as for the most deprived 20% of the population. Discharge rates for tuberculosis have remained fairly steady over the last five years. Socio-economic factors such as poor housing, overcrowding and diet play a significant part in tuberculosis acquisition and explain the higher rates found in the Counties Manukau population.

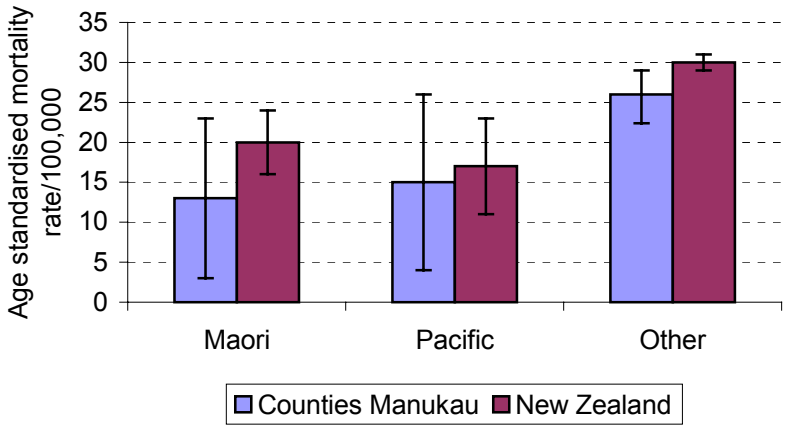
Colorectal cancer

Colorectal cancer is an important cause of morbidity and mortality in New Zealand. Each year about 2,000 New Zealanders are diagnosed with colorectal cancer (CRC) and about 1,000 die from it.[5] The CRC incidence and mortality rates in NZ are among the highest in the world. Colorectal cancer is the second major cause of death from cancer in NZ men (after lung cancer), accounting for 14% of cancer deaths in males. It is also the third most common cause of death from cancer in women (after breast and lung cancer) and causes 16% of all female deaths from cancer.[1]

A number of factors that influence the risk of a person developing CRC have been identified from epidemiological studies. Maori and others of Polynesian descent appear to have significantly lower risk that could be due to environmental or genetic factors or both. Modifiable characteristics include a high fat-low fibre diet, alcohol use, physical inactivity, socio-economic status and smoking.[1] Specific dietary causes are difficult to clarify – for example not all dietary fibre appears to be protective[6].

During the three year period 1996 to 1998 221 Counties Manukau residents died from colorectal cancer, a rate of 25 per 100,000. This is very similar to the NZ rate of 29 per 100,000. The European and other ethnic group have higher mortality rates than either the Maori or Pacific populations (Figure 124), one of the few conditions where this is so. Counties Manukau mortality rates are similar to national rates for all ethnic groups.

Figure 124. Mortality rate of colorectal cancer by ethnicity, CM and NZ 1996-1998*



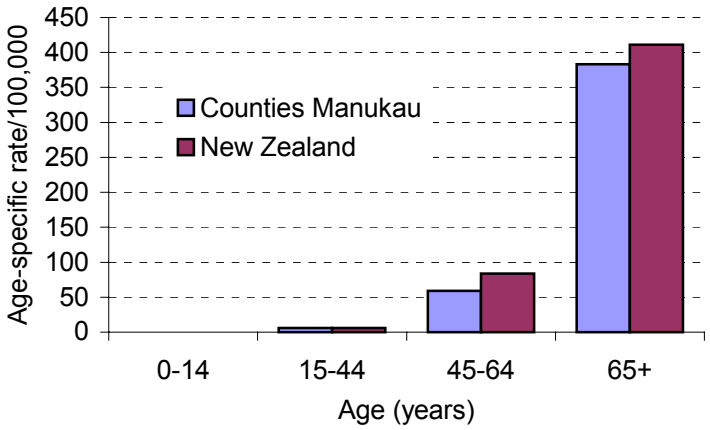
* 1998 data is provisional

In 1999 186 Counties Manukau residents were admitted to hospital with a diagnosis of colorectal cancer, a rate of 61 per 100,000. This was slightly lower than the rate recorded for the total New Zealand population of 68 per 100,000 (difference not statistically significant). The highest rates were in the middle aged and older age groups (Figure 125). In Counties Manukau, 69% of the hospitalisations for CRC were for those aged over 65 years. In general, males and females have similar rates for colon cancer.[1]

[5] *Population screening for Colorectal Cancer.* National Health Committee. National Advisory Committee on Health and Disability. Wellington. 1998.

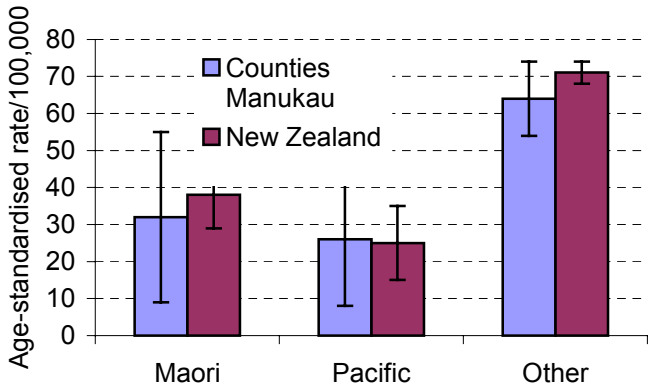
[6] Harris PJ, Ferguson LR. Dietary fibre may protect or enhance carcinogenesis. *Mutat Res* 1999; 443:95-110.

Figure 125. Age-specific discharge rates of colorectal cancer for Counties Manukau and New Zealand residents, 1999.



In line with the known epidemiology, rates for non-Maori and Maori differ, with rates being considerably lower in Maori. CRC incidence in Pacific peoples living in NZ is similarly low. The explanation for this finding is not clear. Some will be genetic, while at least part of the difference in CRC incidence between Polynesian and European people is thought to be due to diet[7]. Lactase deficiency has also been suggested as a factor.[1.] On the whole, Counties Manukau mirrors national trends in discharge rates from CRC.

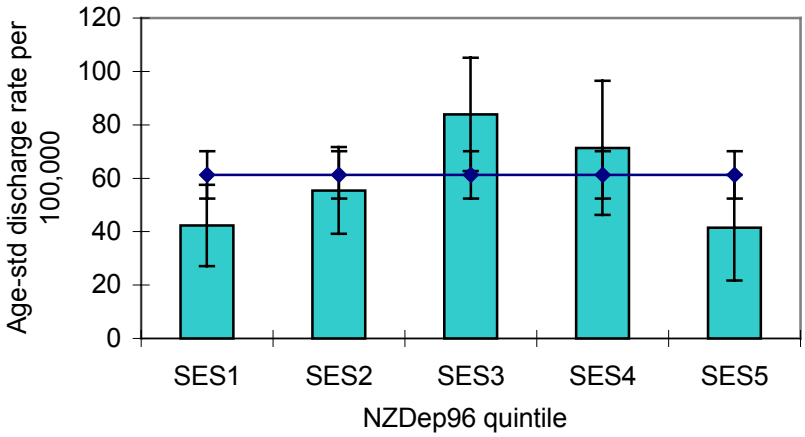
Figure 126. Discharge rates of colorectal cancer by ethnicity, Counties Manukau and New Zealand residents, 1999.



The Counties Manukau discharge rate of CRC by socio-economic status reflects the epidemiology of the disease. As stated above colorectal cancer is less common among Maori and Pacific people, as these people make up a large percentage of the poorest people then rates are lower among the poorest socio-economic groups. There is a clear association with area of deprivation within the European and other group.

[7] Ferguson LR, Yee RL, Scragg R et al. Differences in intake of specific food plants by Polynesians may explain their lower incidence of colorectal cancer compared with Europeans in New Zealand. *Nutr Cancer* 1995;23:33-42.

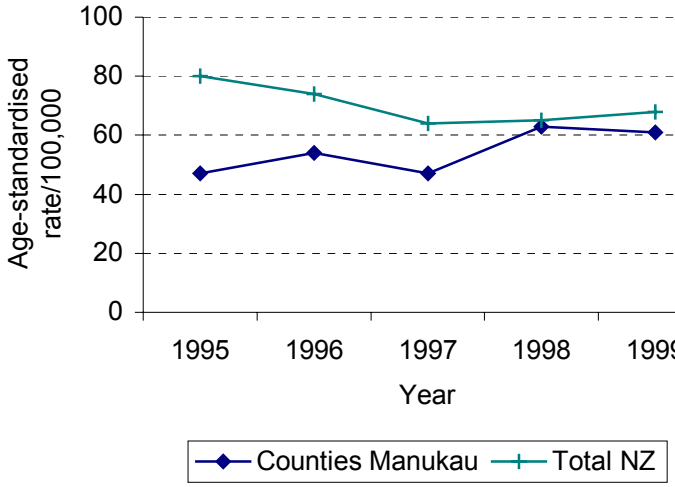
Figure 127. Colorectal cancer age standardised discharge rate by deprivation level of area of domicile, Counties Manukau, 1999



Note: Age-standardised rate per 100,000 population. All ages. Vertical bars show 95% confidence intervals, horizontal line shows Counties Manukau average (complete with confidence intervals).

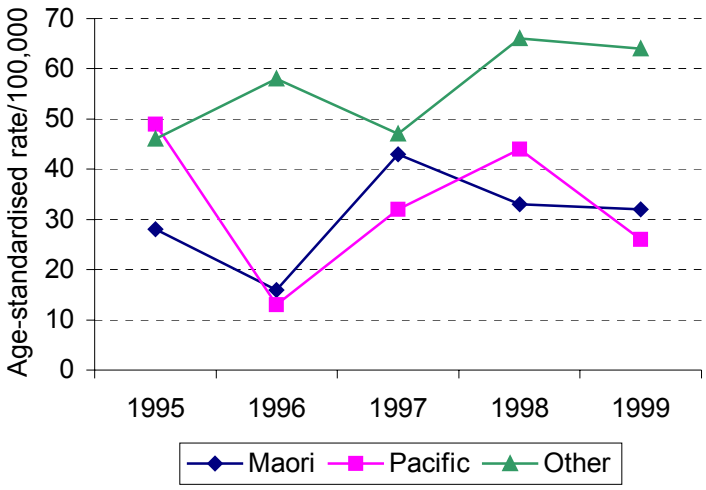
Hospital discharge rates have remained reasonably steady over the last five years for both CM and NZ with the Counties Manukau rate being slightly lower than the national rate as expected with the ethnic mix of the area. The fluctuations seen on the graph below are likely to be due to the low numbers involved.

Figure 128. Discharge rate of colorectal cancer, Counties Manukau and New Zealand residents, 1995-1999.



For the past five years, the other/European ethnic group has consistently had higher rates than the Maori and Pacific populations (Figure 129). In 1999, the Maori discharge rate was 32 per 100,000, which was exactly half the rate found in the other ethnic group (64 per 100,000).

Figure 129. Discharge rates of colorectal cancer by ethnicity , Counties Manukau residents 1995-99



Summary – colorectal cancer

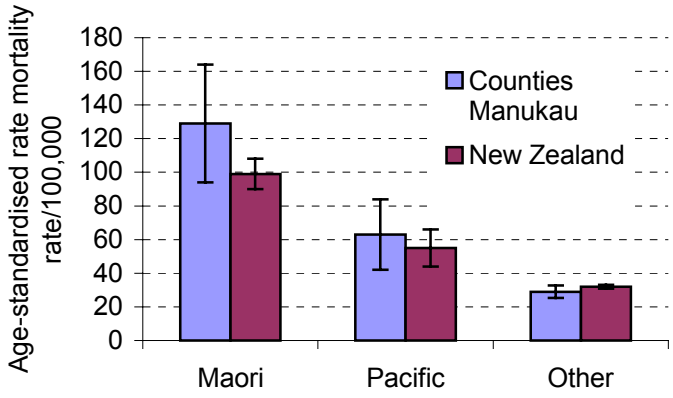
Mortality rates for colorectal cancer for Counties Manukau residents are similar to those of all New Zealand. Discharge rates in Counties Manukau have remained fairly constant since 1995, and are similar to rates found for New Zealand. Pacific and Maori people have about half the mortality and hospitalisation rates of the Other ethnic group.

Lung cancer

Lung cancer is one of the most prevalent cancers in the industrialised world and is a leading cause of cancer death. The major causative factor is tobacco consumption[8] and therefore it is a potentially preventable disease. More on smoking rates is given in Chapter 3, page 50.

Lung cancer has a high fatality/case ratio. It is the most common cause of cancer death in males and the second most common cause for females (after breast cancer) in New Zealand.[9] The rates are highest among populations that smoke more heavily (Figure 130). Between 1996 and 1998, 341 Counties Manukau residents died from lung cancer, a rate of 37 per 100,000. This rate is exactly the same found for the total NZ population.

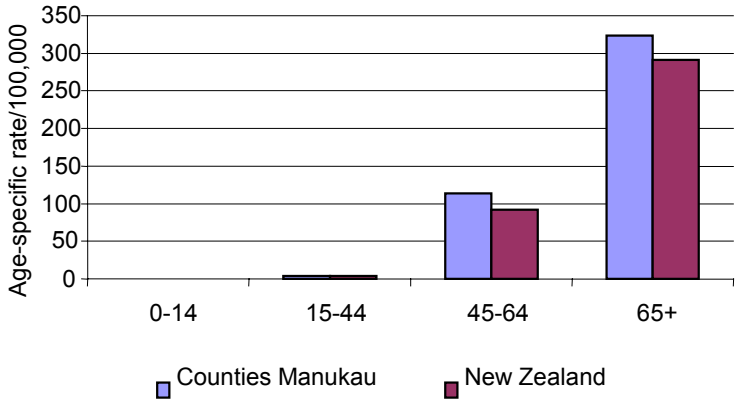
Figure 130. Mortality rates of lung cancer by ethnicity, Counties Manukau and New Zealand residents 1996-98*



Source: NZHIS mortality data. *1998 data is provisional

In 1999, there were 204 hospitalisations for lung cancer for Counties Manukau residents, a rate of 65 per 100,000. This compares to a rate of 55 per 100,000 for the total New Zealand population. This difference is not statistically significant.

Figure 131. Age-specific discharge rates of lung cancer, Counties Manukau and New Zealand, 1999



[8] Horwich A (ed). *Oncology: A multidisciplinary textbook*. Chapman and Hall Medical. London. 1995
[9] *Mortality and Demographic data 1997*. NZ Health Information Service, Wellington. 2000

Lung cancer is a disease that predominantly affects those in the older age groups (Figure 131). In Counties Manukau, 58% of those admitted with lung cancer in 1999 were aged 60 years or over.

Compared with Europeans/others, Maori had higher hospitalisation rates for this disease. The Counties Manukau Maori rate was 134 per 100,000. This was over double the rate for the Other/European ethnic group (56 per 100,000). This finding is likely to reflect the higher smoking rates of Maori compared to Europeans[10].

Figure 132. Discharge rates of lung cancer by ethnicity, Counties Manukau and New Zealand residents, 1999

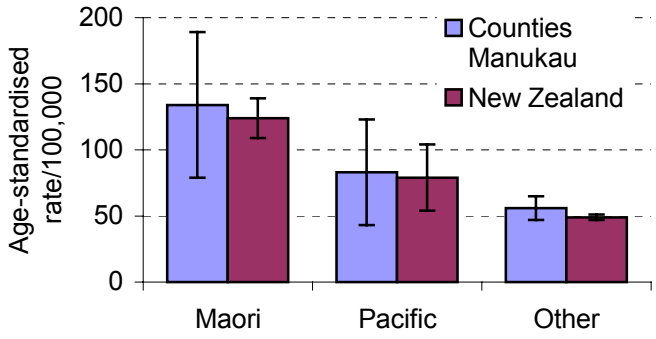
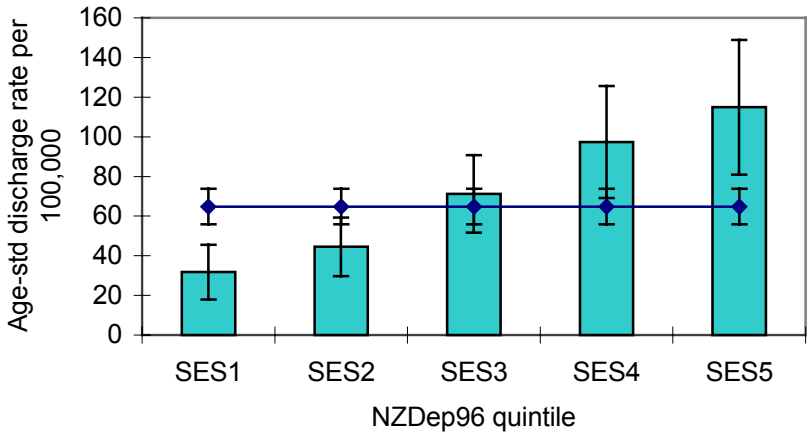


Figure 133. Lung cancer age standardised discharge rate by deprivation level of area of domicile, Counties Manukau, 1999



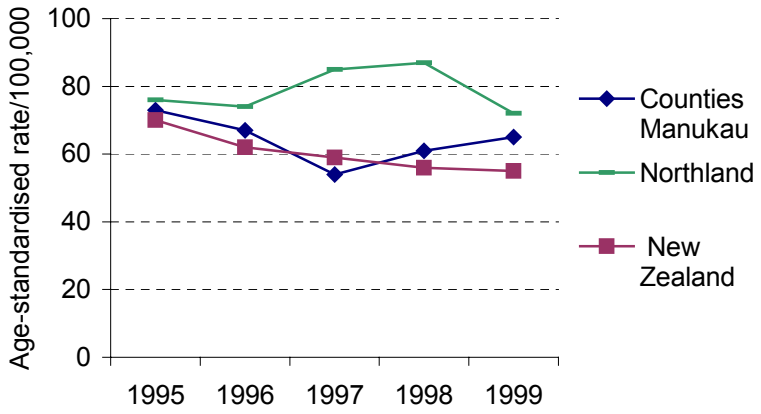
Note: Age-standardised rate per 100,000 population. All ages. Vertical bars show 95% confidence intervals, horizontal line shows Counties Manukau average (complete with confidence intervals).

There is a very marked association between area of deprivation and who gets lung cancer. Higher rates are found in people living in the most deprived areas (Figure 133). This finding will reflect the higher smoking rates found in these groups. The hospitalisation rate for the 20% of the population living in the most deprived areas (SES5) is similar to the Maori rate.

[10] Jackson G et al. *Socio-economic inequalities in health care*. North Health. 1998

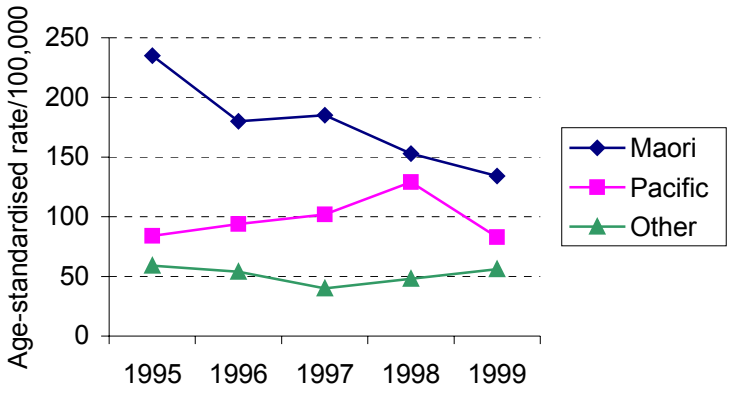
Although Counties Manukau has a relatively large Maori population (17%) and is relatively very deprived, the hospitalisation rates have remained very similar to national rates over the last five years (Figure 134). Northland, an area that is even more deprived and has a higher Maori population, has been included in this graph to show the effects of these factors on lung cancer hospitalisation rates.

Figure 134. Discharge rates of lung cancer, Counties Manukau, Northland and New Zealand residents, 1995-99



The Counties Manukau Maori hospitalisation rate for lung cancer has been higher than the Pacific or "other" rate for the past five years, but that the rate has been steadily decreasing. The reason for this is unclear since smoking prevalence in Maori has not reportedly decreased over this time[11]. It may reflect changes in treatment patterns or possibly of treatment seeking behaviour.

Figure 135. Discharge rates of lung cancer by ethnicity for Counties Manukau residents 1995-99



Summary – lung cancer

Lung cancer coupled with ischaemic heart disease provides clear manifestation of the impact of the tobacco smoking epidemic in New Zealand. Lung cancer is the leading cause of cancer death in Counties Manukau as it is in New Zealand. It impacts particularly on the Maori population and the more deprived sectors of the community. It is an almost entirely preventable disease.

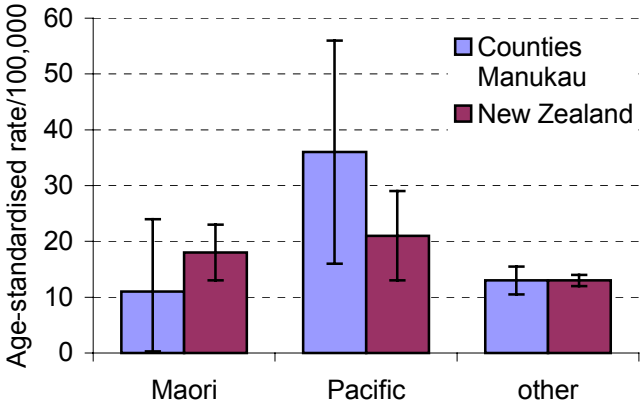
[11] *Progress on Health Outcome Targets*. Ministry of Health. Wellington.1999. Available on www.moh.govt.nz

Prostate cancer

Prostate cancer presents an increasing health problem in all developed countries and is now the most frequently diagnosed male malignancy[12], and the third most common cause of cancer death in males in New Zealand (after lung and colorectal)[13]. There is a wide international variation in prostate cancer rates, which suggests that environmental factors are implicated in the aetiology and that a western lifestyle leads to an increased risk[11]. This form of cancer has a low fatality/case ratio, with almost five times as many registrations as deaths. The ageing male population and improved diagnosis of early stage disease have contributed to the increasing incidence of prostate cancer observed in many Western countries. The clinical significance of these diagnosed cancers is, however, currently unclear.

During the three-year period 1996-1998 120 Counties Manukau residents died from prostate cancer, a rate of 14 per 100,000. This is the same as the national mortality rate. The CM Pacific mortality rate is higher than the NZ Pacific rate, although not statistically significant. The Pacific rate is significantly higher than for the European and other ethnic group (Figure 136).

Figure 136. Prostate cancer mortality rate by ethnicity, Counties Manukau and New Zealand residents, 1996-1998*



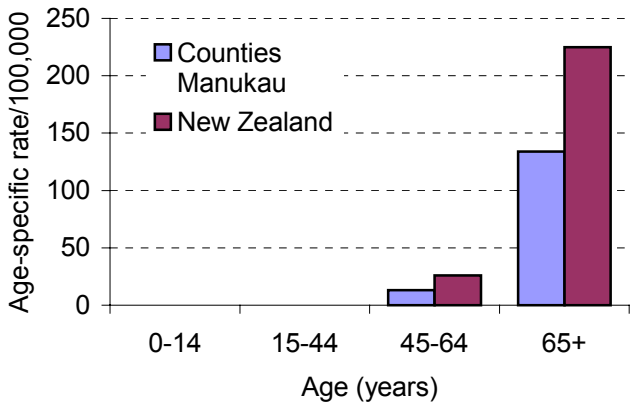
* 1998 data is provisional

In 1999, there were 55 hospitalisations for prostate cancer for Counties Manukau males, an age-standardised rate of 19 per 100,000. This is lower than the national rate of 32 per 100,000. This difference was statistically significant. The finding that the CM hospitalisation rate is significantly lower than the national rate, but that the mortality rate is the same warrants further investigation. The most effective management of prostate cancer is not known and this may explain some of the variation. Access to urological services might be an issue for Counties Manukau men. Urological services are based in Auckland Healthcare and are provided at a lower rate than the New Zealand average (see urology part of Chapter 8 Surgery, p179), but one would not expect that this would compromise access for acute care.

[12] Oncology: A multidisciplinary textbook. Horwich A (ed.) Chapman and Hall Medical. London. 1995
[13] Cancer: new registrations and deaths 1995. Ministry of Health.

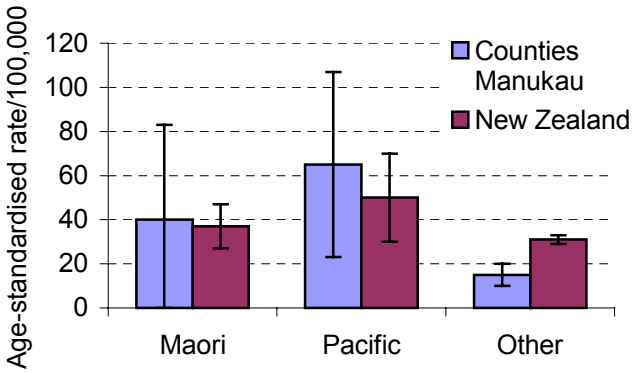
Prostate cancer incidence rises with increasing age (Figure 137). In Counties Manukau, 82% of those hospitalised with prostate cancer were aged over 65 years.

Figure 137. Discharge rates of prostate cancer by age, Counties Manukau and New Zealand, 1999



Pacific men have an increased hospitalisation rate for prostate cancer compared to the Other ethnic group (Figure 138). This is consistent with the mortality figures, and has been noted before with no explanation given[14]. The Counties Manukau "other" rate is significantly lower than the NZ "other" rate. The reason for this is unclear although variation in the management of prostate cancer (as explained above) may account for this difference.

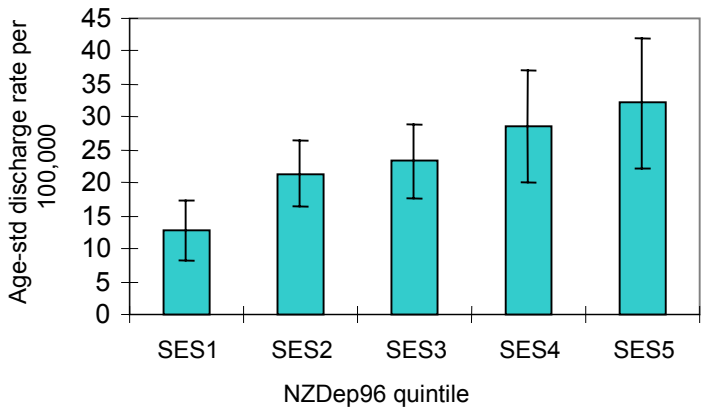
Figure 138. Discharge rates of prostate cancer by ethnicity, Counties Manukau and New Zealand residents, 1999



Prostate cancer hospitalisations show a clear association with area of deprivation (Figure 139). The rate in men living in the highest SES quintile is significantly higher than that of those living in the least deprived quintile (SES1).

[14] *Our Health Our Future*. Minsitry of Health, 1999

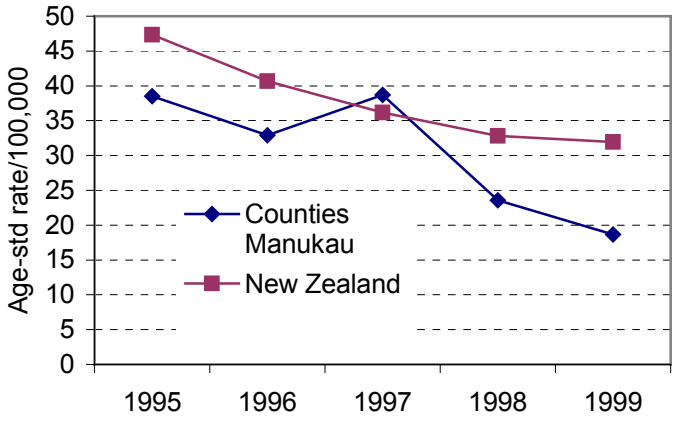
Figure 139. Prostate cancer age standardised discharge rate by deprivation level of area of domicile, Counties Manukau, 1999



Note: Age-standardised rate per 100,000 population. All ages. Vertical bars show 95% confidence intervals.

Hospitalisation rates for prostate cancer have decreased significantly over the last five years (Figure 140). This may be due to treatment modalities other than surgery being used, reducing requirements for in-patient care. The decrease is more puzzling because one might have expected an increase fuelled by greater public awareness and improved disease detection through the wider use of prostate-specific antigen tests and ultrasonography[15].

Figure 140. Discharge rates of prostate cancer, Counties Manukau and New Zealand residents, 1995-1999.



Summary – prostate cancer

Pacific men have higher mortality rates and hospitalisation rates than their European counterparts, although absolute numbers are low as there are relatively few Pacific men aged over 65. Counties Manukau men have a similar mortality rate due to prostate cancer as New Zealand, but a lower hospitalisation rate. This may be due to the treatment modalities used in Auckland, or may relate to access issue to the Auckland Healthcare-provided service. Further work is needed in this area.

[15] First Report on National Health Priority Areas, 1996. Australian Institute of Health and Welfare. Canberra, 1997.

Summary – medicine

The hospitalisation rates for medical conditions in Counties Manukau are consistently higher than the rates for New Zealand as a whole. Those conditions that are most common – angina, pneumonia and cellulitis are much more so in Counties Manukau. Diseases of poverty such as TB, rheumatic fever and cellulitis feature more prominently among the Counties Manukau population. Hospitalisation rates vary considerably by ethnic group, socio-economic status, age and geographical area. Higher hospitalisation rates are strongly associated with area of deprivation and the ethnic group to which someone belongs.