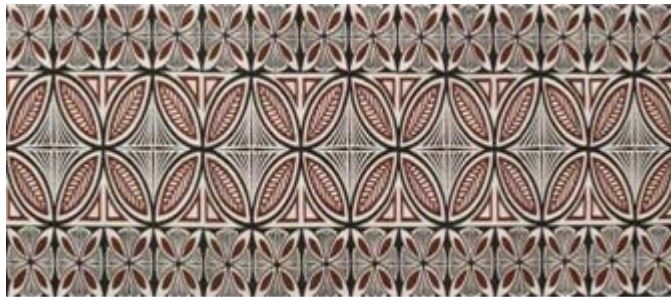


# Health Needs Assessment for Pacific People in Waitemata

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## Foreword

The driving force behind this report is the desire that all peoples of New Zealand / Aotearoa, including Pacific peoples, reach optimal health.

This is the first time that a specific health needs analysis of the Pacific population of the Waitemata district has been done. The information and data collected will allow planning and funding of services that address specific areas where Pacific people experience particular disadvantage. The information also establishes a baseline that will allow Waitemata District Health Board to measure any change in the health status of Pacific people overall and in specific areas in relation to interventions put in place.

The information in this report identifies specific barriers to accessing health services and other economic issues such as lack of transport and lack of home heating. Such barriers cannot be addressed by the health sector alone, so it is hoped that this report is accessed and used by other sectors in their planning processes.

I would like to thank members of the Pacific community who attended the consultation meetings that were undertaken. Many of the views you shared coincided and were confirmed by the data that has been collected especially in relation to the barriers experienced by Pacific people in accessing health services. Some of the perspectives that you wanted to be included, such as the strengths of Pacific people and communities and Pacific concepts of health are not strongly reflected in this report because of difficulties of quantifying and measuring such concepts. However, health needs analysis is an ongoing process and we will continue to work on developing indicators that can reflect these perspectives and concepts in future reports.

Finally, I would like to thank Dr. John Hu'akau. This report would not have been possible without his expertise and commitment. I would also like to thank the Manager and members of the Health Information for Action Team, the Community Engagement Co-ordinator, the Programme Manager Pacific Health for undertaking the support tasks that has allowed this report to be produced.

Malo 'aupito

Lita Foliaki

## Executive Summary

### Introduction

This executive summary briefly describes the purpose, methodology and content of the Pacific Health Needs Assessment (HNA) along with a summary of the demography and health status of, and issues raised in consultation with, Pacific peoples within the Waitemata district.

### Purpose

The purpose of the Pacific HNA was to describe the health needs of the Pacific population within the Waitemata District. The approach this report took was to describe the health needs of the Pacific population through detailing different aspects of the Pacific population including the demography of Pacific people within New Zealand and the Waitemata District, their cultures and languages, social, economic and environmental factors, their health status, disease and risk factor prevalence/incidence and utilisation of health services.

### Methodology

This report was written using routinely collected data and results from published national surveys and statistical reports. Most information was of a quantitative nature and there was a limit on the time and resources available for preparing and writing this report.

Initial community consultations were undertaken to discuss the content and structure of the Pacific HNA report. Based on these meetings the content and format of the report was decided upon. The content was to include ethnic, age-group and area based analysis and the format or structure of the report was to be guided by the Fonofale model of health. Ethnic and area-based analyses were not able to be undertaken for a substantial number of indicators because of the relatively small numbers involved. The Fonofale model of health incorporates the most important values of Pacific people including family, culture and spirituality as well as physical and mental health, and other factors that impact on health. The model also views Pacific health as being impacted upon by the environment, time (current and historical) and the contexts (such as political and socioeconomic).

There was also wider community consultation after an initial draft was prepared at which key findings were presented. At these meetings the community were asked to add further to these findings by providing either written or oral feedback on what they saw were other important health needs of their respective Pacific communities. These results are included in this report and add valuable qualitative information to the Pacific HNA.

### Summary of findings

We list some of the findings under the headings of demography, adult health, infant and maternal health, child and youth health, older people's health, health service utilisation and community consultations. Lastly we list some of the good news findings. All rates mentioned (except infant and maternal rates) within this summary are age-standardised to the World Health Organisation (WHO) world population. Differences are statistically significant when specified as such. The term similar is used when difference may not be statistically significant. While a number of differences with the

total Waitemata population were evident, these differences often failed to reach statistical significance because of the relatively small numbers involved.

## Demography

- Pacific Peoples are estimated to number 36500 or 6.3% of the total population in Waitemata in 2008.
- Pacific Peoples are culturally and ethnically diverse.
- The Pacific population has a young age structure (over half are under 25 years old).
- Over three-quarters of Pacific people are residents of Waitakere City and a further one-fifth are residents of North Shore City.
- Close to a third (30%) of Pacific people live in the most deprived areas (Decile 9 and 10) compared to 8% of all Waitemata residents and 58% of New Zealand Pacific residents.
- Pacific people have the highest rate of live births in Waitemata (103.3 per 1000).
- The Pacific population is expected to number 62,000 or 8.9% of the total Waitemata population by 2031.

## Adult Health

### Life expectancy, mortality and hospitalisations

- Life expectancy at birth for 2003-05 for Pacific people in Waitemata was 71 years for males (which was nine years less than for total Waitemata population males but only one year less than New Zealand Pacific males) and 77 years for females (which was seven years less than for total Waitemata population females but the same as New Zealand Pacific females).
- The Pacific overall mortality rate for 2003-05 was 739 per 100,000, which was almost twice that of the total Waitemata population though similar to the New Zealand Pacific rate (708 per 100,000).
- The avoidable mortality rate for Pacific was 290 per 100,000 - more than twice as high as for the total Waitemata population though similar to the New Zealand Pacific rate (310 per 100,000).
- The Pacific overall hospitalisation rate for 2005-07 was 238 per 1000, which was 30% higher than that of the total Waitemata population though similar to the New Zealand Pacific rate (225 per 1000).
- The avoidable hospitalisation rate for Pacific was 6360 per 100,000, around 80% higher than the total Waitemata population and 10% higher than the New Zealand Pacific rate.

## General and mental health

- 53.1% of Pacific people aged 15 and over reported their general health status was excellent or very good, this was 9% less than that reported by the total Waitemata population.
- 7.6% of Pacific people aged 15 and over reported a chronic mental health condition, which was similar to the rate for the total Waitemata population.
- 9.6% of Pacific people aged 15 and over had a high or very high probability of having an anxiety or depressive disorder; this was two times higher than that reported by the total Waitemata population.

## Health status-Cardiovascular disease

- 311 Pacific people per 100,000 died from cardiovascular disease over the three year period of 2003-2005, this was more than two times higher than for the total Waitemata population.
- 6.6% of Pacific people aged 15 and over reported having diabetes. This was two times higher than the rate reported by the total Waitemata population.
- 762 Pacific people per 100,000 were hospitalised due to diabetes over the three year period 2005-2007, which was four times higher than the rate reported by the total Waitemata population.
- 114 Pacific people per 100,000 were hospitalised due to renal failure over the three year period of 2005-2007, which was almost seven times higher than the rate reported by the total Waitemata population.
- 2.1% of Pacific people aged 15 and over reported having Ischaemic heart disease, which was similar to the rate for the total Waitemata population.
- The Ischaemic heart disease mortality rate for Pacific people was 325 per 100,000, which was two and a half times higher than for the total Waitemata population.
- Around 1% of Pacific people aged 15 and over reported having had a stroke, which was similar to the rate for the total Waitemata population.
- The Stroke mortality rate for Pacific people was 113 per 100,000, which was two times higher than for the total Waitemata population.

## Health status-Cancer

### Mortality

- 178 Pacific people per 100,000 died from cancer over the three year period of 2003-2005, which was also 46% higher than for the total Waitemata population.
- The lung cancer mortality rate for Pacific people was 54 per 100,000, which was 50% higher than for the total Waitemata population.
- The breast cancer mortality rate for Pacific women was 61 per 100,000, which was 70% higher than for the total Waitemata population.

- The prostate cancer mortality rate for Pacific men was 70 per 100,000, which was similar to the rate for the total Waitemata population.
- The cervical cancer mortality rate for Pacific women was 27 per 100,000, which was five times higher than the rate for the total Waitemata population.
- The colorectal cancer mortality rate for Pacific people was 14 per 100,000 was similar to the rate for the total Waitemata population.

### Registration

- The lung cancer registration rate for Pacific people was 86 per 100,000, which was almost two times higher than for the total Waitemata.
- The breast cancer registration rate for Pacific women was 114 per 100,000, which was similar to the rate for the total Waitemata population.
- The cervical cancer rate for Pacific women nationally was higher than the rate for the total female population in Waitemata.
- The prostate cancer registration rate for Pacific men was 204 per 100,000, which was similar to the rate for the total Waitemata population.
- Cervical cancer registration data was not supplied for Pacific women in Waitemata because of the relatively small numbers involved.
- The colorectal cancer registration rate for Pacific people was 53 per 100,000, which was similar to the rate for the total Waitemata population.

### Health status-Respiratory diseases

- 7.7% of Pacific people aged 15 and over reported having taking medication for Asthma, which was similar to the rate for the total Waitemata population.
- 315 Pacific people per 100,000 were hospitalised due to Asthma over the three year period 2005-2007, which was three times higher than the rate among the total Waitemata population (107 per 100,000) and over twice the national Pacific rate (251 per 100,000).
- 3.2% of Pacific people aged 15 and over reported having Chronic Obstructive Pulmonary Disease (COPD), which was similar to the rate reported for the total Waitemata population.
- 1515 Pacific people (aged 45+) per 100,000 were hospitalised due to Chronic Obstructive Pulmonary Disease over the three year period of 2005-2007, which was more than three times higher than the rate among the total Waitemata population (506 per 100,000) and also higher than the rate among the national Pacific population (1247 per 100,000) .

### Health Status-Injury

- 8.1% of Pacific people died from unintentional injury in 2003-05, which was similar to the rate for the total Waitemata population.

- 2067 Pacific people per 100,000 were hospitalised due to unintentional injury in 2003-05, which was 30% higher than the rate reported by the total Waitemata population.

### **Health Status-Risk factors**

- 19% of Pacific people aged 15 and over are current daily smokers, which was similar to the rate for the total Waitemata population and considerably lower than the national Pacific population (26%).
- 38% of Pacific people aged 15 and over regularly ate three or more servings of vegetables per day. This rate was almost one and a half times lower than for the total Waitemata population.
- 60% of Pacific people aged 15 and over regularly ate two or more servings of fruit per day, which was comparable to the rate for the total Waitemata population.
- 44% of Pacific people aged 15 and over undertook regular physical activity, which was similar to the rate for the total Waitemata population.
- 25% of Pacific people aged 15 and over were overweight and a further 48% were obese; this rate of obesity was almost two and a half times higher than the obesity rate for the total Waitemata population.

### **Infant and maternal health**

- The Pacific prevalence of low birth weight was around 40 per 1000 live births which was 70% lower than for the total Waitemata population.
- The Pacific infant mortality rate (birth to 1 year) was around 3 per 1000 live births, which was similar to the total Waitemata population rate (4 per 1000 live births) though considerably lower than the New Zealand Pacific rate (7.2 per 1000 live births).
- Pacific perinatal mortality rate (20 weeks gestation to 7 days) was around 10 per 1000 live births, which was comparable to the rate for the total Waitemata population and lower than the New Zealand Pacific rate (12 per 1000 live births).
- The Pacific exclusive and full breastfeeding for 10-16 weeks rate was 47%, which was lower than the total Waitemata rate (55%) though higher than the New Zealand Pacific rate (43%).
- The Pacific exclusive and full breastfeeding for 16 weeks-8 month rate was 19%, which was lower than the total Waitemata rate (24%) though higher than the New Zealand Pacific rate (18%).
- Pacific Mothers' admission for pregnancy complications was 378 per 1000 live births, which was the higher than the total Waitemata rate (271 per 1000 live births) though less than the New Zealand Pacific rate (412 per 1000 live births).



## Child and Youth Health

- In 2006 around 61% of Pacific Year 8 School children had their teeth examined, which was 13% in magnitude less than total Waitemata population.
- In 2006, the average number of decayed, missing or filled teeth for Pacific Year 8 School children was two, which was 50% more than that of the total Waitemata population.
- The hospitalisation rate for Asthma in Pacific children aged 0-14 was 1011 per 100,000, which was close to three times higher than the total Waitemata population rate.
- The hospitalisation rate for falls in Pacific children aged 0-14 was 832 per 100,000, which was 20% higher than the total Waitemata population rate.
- The hospitalisation rate for unintentional injury for Pacific youth aged 15-24 was 2405 per 100,000, which was 40% higher than the total Waitemata population rate.
- The rate of Live and Still births to Pacific teenage (15-19) Mothers in 2007 was 41 per 1000 births, which was close to double the total Waitemata population rate.

## Older People's health

### Health status-Cardiovascular disease and lung disease

- The Pacific mortality rate among people aged 65+ years for Ischaemic heart disease was 1734 per 100,000 which was close to two and a half times higher than the total Waitemata rate.
- The Pacific mortality rate among people aged 65+ years for stroke was 585 per 100,000 which was over 70% higher than the total Waitemata rate.
- The Pacific hospitalisation rate among people aged 65+ years for stroke was 2055 per 100,000 which was over two and a half times higher than the total Waitemata rate.
- The Pacific male hospitalisation rate among people aged 65+ years for Chronic Obstructive Pulmonary Disease was 6704 per 100,000 which was over four and a half times higher than the total Waitemata rate.

## Health Service Utilisation

### Primary care

- Pacific PHO enrolment was 90% which was similar to the total Waitemata population.
- Pacific GP utilisation in preceding 12 months was 77% compared to 80% of the total Waitemata population.

- Pacific unmet need for GP services (i.e. needed to see a GP but not done so for any reason) in the preceding 12 months was 13% compared to 8% of the total Waitemata population though similar to New Zealand Pacific population (12%).
- Pacific use of an oral healthcare worker in the preceding 12 months was 33% compared to 49% of the total Waitemata population.
- Pacific use of complementary services in the preceding 12 months was 12% compared to 20% of the total Waitemata population.
- Pacific fully immunised at 2 years old was 76% compared to 79% of the total Waitemata population.
- Pacific people with diabetes who had free annual check was 62% compared to 47% of the total Waitemata population.
- Pacific people who had satisfactory management of their diabetes was 59% compared to 79% of the total Waitemata population.
- 48% of Pacific women were screened for breast cancer compared to 54% of the total Waitemata population.
- 55% of Pacific women were screened for cervical cancer compared to 76% of the total Waitemata population.

### Secondary care

- Pacific Public hospital use was 13% compared to 14% of the total Waitemata population.
- Pacific acute readmission rate was 30% compared to 28% of the total Waitemata population.
- Pacific elective surgery rate was 3269 per 100,000 which was 24% higher compared to 2633 per 100,000 for the total Waitemata population.
- Pacific use of a medical specialist in the preceding 12 months was 18% compared to 30% of the total Waitemata population.
- Pacific use of Emergency Department in the preceding 12 months was 8% compared to 7% of the total Waitemata population.

### Community consultation

The following additional health needs were identified during consultation with Waitemata's Pacific community. The point was made that the people attending the consultation meetings could only voice opinions from a well person's perspective – the reality for people burdened by ill health, with English as a second language, on a low income, also should be considered.

## Barriers to health care

- Deprivation – this is a key factor for Pacific people in relation to accessing services and the barriers to accessing services.
- No emergency services in Waitakere; limited specialist services in Waitakere.
- Lack of transportation.
- Lack of childcare (barrier to participation in physical activity programmes)
- Opening hours restrictive.
- Work hours restrictive (e.g. may not be able to take time off work to see GP).
- Constraints on time and money (not enough money to buy good food).
- Cultural and communication barriers with health service staff leading to not feeling comfortable with services (e.g. use of medical jargon, not being listened to, being rushed out, needs not being considered, not being respected).
- Lack of information or knowledge of services and their costs.
- Expensive services (especially to see dentist and call ambulance; even relatively low cost services e.g. \$15 for a GP visit can be prohibitive given low income).
- Pride / losing face.

## Health education

- Need to train church and community leaders and elders and they will train the community.
- Ethnic specific messages on Television and Radio useful.
- Children can inform their families – target schools (but need to target parents too so that they are receptive).
- Specific health education needs around: HEHA (healthy eating, healthy action including budgeting barriers to putting HEHA into practice), cancer screening, proactive approach to chronic disease, mental health (what it is and how to deal with it), navigating the health system (e.g. knowing that it's ok to ask questions, knowing how to make a complaint), when to access health services (so that don't come too late/early)).

## Workforce

- Need to build Pacific health workforce capacity (e.g. through health sector scholarships, mentoring).
- Need to support those being trained by providing scholarships and mentoring.
- Need to increase the cultural and communication competence among the mainstream workforce – some people feel that they are not listened to and/or looked down upon.

## Health service needs

- Pacific Board membership of Waitemata DHB.
- Full hospital services in Waitakere City.
- Health needs of Pacific people on the North Shore need to be addressed separately from Waitakere (but not forgotten).
- Generally need to advertise and promote health services better, especially those that are free / low cost.
- Health services need to be affordable, accessible (local, late opening hours, for primary and secondary services), appropriate (culturally and clinically).
- Pacific health centres with dental clinics to provide low cost (but high quality e.g. seeing same practitioner every / most times) GP and dental services.
- More Pacific specific services (e.g. for cervical/breast screening).
- Separate out Pacific services for men and women (tapu) (although Palagi services may be better for sensitive issues).
- Interpreters for Pacific people in the hospital.
- More high quality out-reach services like Wellness-out-West bus (e.g. for provision of dental services).
- Better discharge planning, especially the provision of information to patients and their families.
- Child, Youth and Maternal Mental health service.
- Support for care of elderly at home.
- Acknowledge role of traditional healers.
- Reduce bottlenecks in the system (e.g. having to go to GP for WINZ letters).

## Groups to target

- Youth – need to make sure they get a good start in life; youth alcohol and drug services needed; lack of access to GP; sexual and mental health are important issues for youth; not engaged in processes such as this HNA.
- Men – not looking after themselves; too busy working; leaving health problems to the last minute; prostate cancer an important issue.
- People with chronic diseases – many too embarrassed to consult doctors about this.
- Older people.

- Mental health (consider contribution of mental health to other chronic diseases e.g. obesity/diabetes).
- Disability.
- Circumcision.
- Alcohol.
- Medication adherence.

### Other issues

- Housing (ventilation and insulation, overcrowding).
- Safety (concern about violence in society).
- Budgeting services required.

## Some good news comparisons

### Waitemata Pacific compared with New Zealand

- Waitemata Pacific (all ages) had a lower rate (8.1 per 100,000) of unintentional injury mortality than their New Zealand counterparts (22.4 per 100,000).
- Waitemata Pacific females had a lower prevalence (8.3%) of chronic mental health conditions than their New Zealand counterparts (15.7%).
- Waitemata Pacific females had a lower rate (44.4 per 100,000) of self-harm hospitalisations than their New Zealand counterparts (130.5 per 100,000).
- Waitemata Pacific male and female babies had lower rates of low birth weight (37.6 and 42.4 per 1000 live births respectively) than their New Zealand male and female counterparts (57.1 and 65.7 per 1000 live births respectively).
- Waitemata Pacific had a higher live birth rate (103.3 per 1000) than their New Zealand counterparts (63.0 per 1000).

### Waitemata Pacific compared with New Zealand Pacific

- Only 10% of Waitemata Pacific live the most deprived areas (NZDep06 Decile-10 areas) compared to 35% of their New Zealand Pacific counterparts.
- Waitemata Pacific youth aged 15-19 were less likely (males 17.2%; females 17.1%) to be current smokers than their New Zealand Pacific counterparts (males 27.8%; females 45.8%).
- Waitemata Pacific youth aged 20-24 were less likely (males 34.6%; females 35.0%) to be current smokers than their New Zealand Pacific counterparts (males 39.0%; females 38.5%).
- Waitemata Pacific had lower rates of obesity (47.6%) than their New Zealand Pacific counterparts (61.3%).

- Waitemata Pacific (all ages) had lower rates (8.1 per 100,000) of unintentional injury mortality than their New Zealand Pacific counterparts (20.7 per 100,000).
- Waitemata Pacific had higher immunisation coverage rates (75.6%) at two-years old than their New Zealand Pacific counterparts (67.6%).
- Waitemata Pacific had higher (2.2% or 2298 per 100,000) rates of access to secondary mental health and addiction services than their New Zealand Pacific counterparts (1.8% or 1855 per 100,000).
- Waitemata Pacific had lower infant mortality rates (3.1 per 1000 live births) than their New Zealand Pacific counterparts (7.2 per 1000 live births).

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### Waitemata Pacific community

To all members of our Waitemata Pacific community who gave their time and knowledge to us during our two rounds of community consultations we would like to thank you very much.

## Abbreviations

ED	Emergency Department
ADHB	Auckland District Health Board
ARDS	Auckland Regional Dental Service
ARPHS	Auckland Regional Public Health Service
ASH	Ambulatory Sensitive Hospitalisations
ASR	Age-Standardised Rate
BMI	Body Mass Index
BP	Blood Pressure
BSA	Breast Screen Aotearoa
CHD	Coronary Heart Disease
CI	Confidence Interval
CMDHB	Counties Manukau District Health Board
COPD	Chronic Obstructive Pulmonary Disease
CVD	Cardiovascular Disease
DAP	District Annual Plan
DHB	District Health Board
DMFT	Decayed, Missing or Filled Teeth
DSP	District Strategic Plan
FTE	Full Time Equivalent
GP	General Practitioner
HDIU	Health and Disability Intelligence Unit (formerly Public Health Intelligence)
HIAT	Health Information for Action Team
HNA	Health Needs Assessment
ICD	International Classification of Disease
MHINC	Mental Health Information National Collection
MoH	Ministry of Health



NCEA	National Certificate of Educational Achievement
NCSP	National Cervical Screening Programme
NDSA	Northern District Health Board Support Agency
NGO	Non Governmental Organisation
NHI	National Health Index
NMDS	National Minimum Data Set
NSH	North Shore Hospital
NWH	National Women's Hospital
NZ	New Zealand
NZDep	New Zealand Deprivation Index
NZDS	New Zealand Disability Strategy
NZHIS	New Zealand Health Information Service
NZHS	New Zealand Health Survey
PAH	Potentially Avoidable Hospitalisation
PAM	Potentially Avoidable Mortality
PHI	Public Health Intelligence (now Health & Disability Intelligence Unit)
PHO	Primary Health Organisation
RR	Rate Ratio
SMR	Standardised Mortality Rates
SNZ	Statistics New Zealand
SRR	Standardised Rate Ratio
STIs	Sexually Transmitted Infections
TLA/TA	Territorial (Local) Authority
WDHB	Waitemata District Health Board
WHO	World Health Organization
WKH	Waitakere Hospital

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## **Introduction**

This section outlines the purpose, context and content of this document. This section also describes the structure the document takes and details methodological issues relating to definition of ethnic groups, comparison groups, numerators, denominators data, age standardisation, statistical analyses and definitions of avoidable mortality and morbidity and deprivation.

## **Purpose**

The purpose of this report was to describe the health needs of the Pacific population within the Waitemata District. The approach this report takes was to describe the health needs of the Pacific population through detailing different aspects of the Pacific population, including their history of migration to New Zealand, their cultures and languages, the demography of Pacific people in New Zealand and the Waitemata District, their health status, disease and risk factor prevalence/incidence and utilisation of health services.

## **Methodology**

### **Data sources**

This report was written on the basis that only existing databases and published survey information could be used to compile information and statistics in this report because of time constraints (see Appendix 5 for the list of data and information sources).

### **Consultation**

Initial community consultation was undertaken in August 2008 to discuss the content and structure of this report. Two meetings took place (one in Waitakere City and one in North Shore City) with the Pacific community health leaders and other interested individuals. Based on these meetings the content and format of the report was decided upon. A brief summary of the feedback from both these initial meetings is provided in Appendix 1.

There was also wider community consultation after an initial draft was prepared in November 2008. This consultation involved two meetings (again one in Waitakere City and one in North Shore City) in which key findings were presented and the community was asked to add further to these findings by providing either written or oral feedback on what they saw as the most important health needs of their respective Pacific communities. A brief summary of this second round feedback from both meetings is provided in Appendix 1.

### **Content**

From the community consultations there was strong support to focus on both ethnic groups and age group analysis, in particular having sections on child and youth health, adult health and older peoples' health. There was also support for area based analysis and time trend data. To help satisfy most of these points, this report will include sections by ethnic groups on key indicators of health status, diseases, determinants of health and risk factors associated with disease and sections on child and youth health, adult health and older peoples' health.

## Structure

The North Shore City meeting suggested that the report be structured using a Pacific model of health. This suggestion was taken on board and the Fonofale model of health was used to structure the content. The Fonofale model of health is described in Appendix 2. It incorporates the most important values of Pacific people including family, culture and spirituality as well as physical and mental health, and other factors that impact on health. The model also views Pacific health as being impacted upon by the environment, time (current and historical) and other contexts (such as political and socioeconomic).

We have structured this report under the following main headings:

1. Time-which includes Pacific demography and migration
2. Culture-which includes ethnicity and language
3. Family-which includes family structure
4. Context-which includes social, economic and behavioural factors
5. Environment-which includes geography, population density and housing
6. Spiritual-which includes religious affiliation
7. Physical-which includes many aspects of physical health
8. Mental- which includes many aspects of mental health
9. Other-health service utilisation

## Methodological issues

### ***Ethnicity***

Ethnic groups are defined in two ways in various parts of this report. Sometimes a total response ethnic group method was used (which allows people to be counted as belonging to more than one ethnic group. At other times, ethnic group was defined using a prioritised system in which a person is placed in only one ethnic group even if they say they have multiple ethnicities. Under the prioritised system, Maori ethnicity was coded first and then Pacific next, then Asian, Other and lastly European. For further information about ethnicity see Appendix 3.

### ***Comparison groups***

From an epidemiological point of view it was important to compare and contrast different groups. For this report we have chosen to compare the Waitemata Pacific population to the total Waitemata population and the national (New Zealand) Pacific population.

### ***Numerator Data***

We have chosen to pool a number of years of data to provide sufficient numbers to accurately report rates.

### ***Denominator Data***

Denominator data were supplied by the Health & Disability Intelligence Unit (HDIU) of the Ministry of Health for certain years for mortality and hospitalisation rate calculations. Census data from the 2001 and 2006 census and estimates based on the 2001 census and 2006 census for years between census and for 2007 and 2008 were also utilised when required.

### ***Age-specific and age-standardised rates***

Where appropriate, rates in this report are standardised for age to enable a valid comparison between populations where age structure differs. Rates are age-standardised using the World Health Organization standard population age weights (see Appendix 4). Age-specific rates are presented for indicators relating to a defined age group. However, several indicators are presented with *crude rates* (that is, no adjustment has been made). Please note that crude rates cannot be compared between population groups with different age distributions e.g., Maori compared with non-Maori. The titles of the tables state which rates have been used.

Some parts of this report were prepared by the Health & Disability Intelligence Unit of the Ministry of Health and they have used the World Health Organisation standard population age weights for age standardisation.

### ***Statistical analysis***

In this report 95% confidence intervals are presented for some analyses. The confidence intervals give an indication of the margin of error associated with the survey estimates. When the 95% confidence intervals of two rates do not overlap, the difference between the two rates is said to be statistically significant at the 5% level. It is important to note that the converse is not necessarily true. If the two confidence intervals of two rates do overlap and may still be statistically significantly different from each other. The only way to test this is to carry out significance test. So in general we are taking a conservative approach to reporting statistically significant differences throughout this report. When confidence intervals for two rates overlap we have said these rates are similar, this does not imply either that they are not statistically significantly different from each other or that they are statistically significantly different from each other.

### ***Avoidable mortality and morbidity***

This report has used the terms 'avoidable mortality' and 'avoidable hospitalisations'. These measures are useful for estimating potential for improvement in health and equity in health outcomes. Disease and injury codes (as causes of death or hospitalisation) are classified into 'avoidable' or 'unavoidable' – the concept of avoidable means responsiveness to health sector interventions (through prevention, early diagnosis or treatment). By this definition all deaths after the age of 75 are considered unavoidable.

Avoidable mortality and morbidity can be further defined according to where the intervention occurs. Avoidable hospitalisations are broken down into:

- Preventable hospitalisation – hospitalisation from a condition that could have been prevented altogether
- Ambulatory sensitive hospitalisation (ASH) – hospitalisation for a condition that could have been treated at an earlier stage in the primary health care setting. This measure was reported in the primary care section of this report

- Injury prevention – hospitalisations preventable through injury prevention.

Hospitalisations for conditions that are classified as avoidable hospitalisations are distributed amongst these three categories according to international literature and expert opinion. Avoidable mortality was not broken down further in this health needs assessment.

### ***NZDep2006***

The NZDep2006 variable is an area based index of deprivation. It is normally used to measure the level of deprivation for each meshblock (small geographical unit containing a median of 90 people) according to a combination of census variables (income, access to a car, living space, ownership of home, employment status, qualifications, sole-parent families and access to a telephone).

For analysis of health outcomes, databases do not allow mapping of individual events to meshblock areas, but only to larger census area units (CAU). The denominator populations therefore also need to be mapped to CAUs. In the Waitemata district this leads to very small numbers of the population in quintile 5 (the most deprived) CAUs. Rates for these areas may therefore be inaccurate due to chance variation.

### **Limitations**

The major limitations of this report are that only pre-existing data sources were used, most of the information is of a quantitative nature and the report was prepared over a short time period.

## Time

### Migration

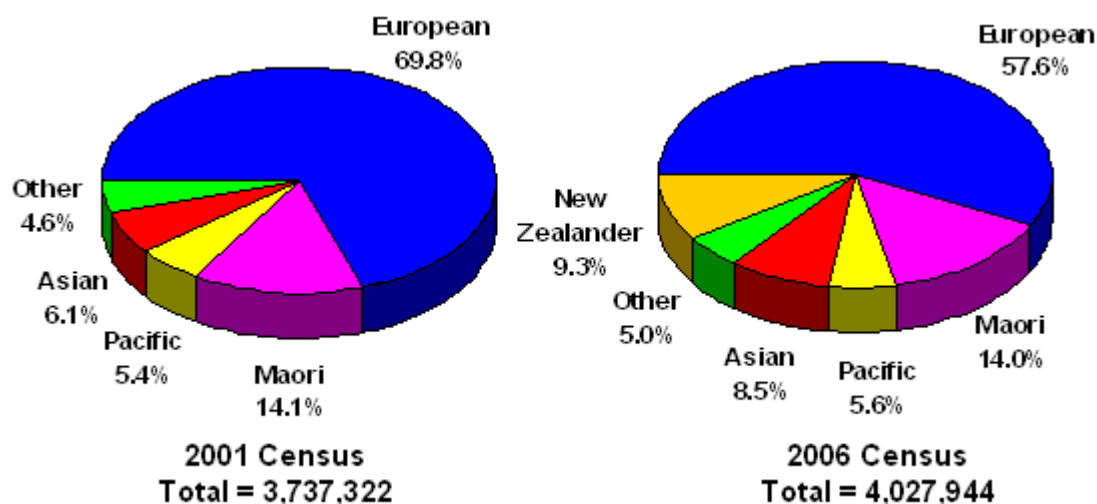
In New Zealand, “Pacific” usually refers to people of Samoan, Tongan, Cook Islands, Fijian, Niue, Tokelauan, or Tuvaluan descent, although there are also people from other Pacific Islands resident in the country. The most significant influx of Pacific peoples to New Zealand occurred between the 1950s and 1970s and the migrants were mainly from Samoa, Cook Islands, Niue, and Tokelau and in the 1970s from Tonga.

### Pacific people in New Zealand and Waitemata

#### Pacific population in New Zealand

According to the 2006 Census, there were 4,027,944 people who usually lived in New Zealand. Figure 1 shows the proportions of the population by ethnicity for 2001 and 2006. In 2006 Pacific made up 5.6% or 226,290 of the people in New Zealand. Note that in the 2006 Census, Statistics New Zealand introduced a new grouping for ethnicity called ‘New Zealander’.

Figure 1 New Zealand population by ethnicity (total response)



#### Pacific population by District Health Board in New Zealand

Table 1 shows the top ten District Health Board (DHB) areas with the highest numbers of Pacific people from the 2006 Census. About 158,883 or 70% of Pacific people lived in the Auckland region. Counties Manukau had the highest numbers of Pacific, followed by Auckland and then Waitemata.

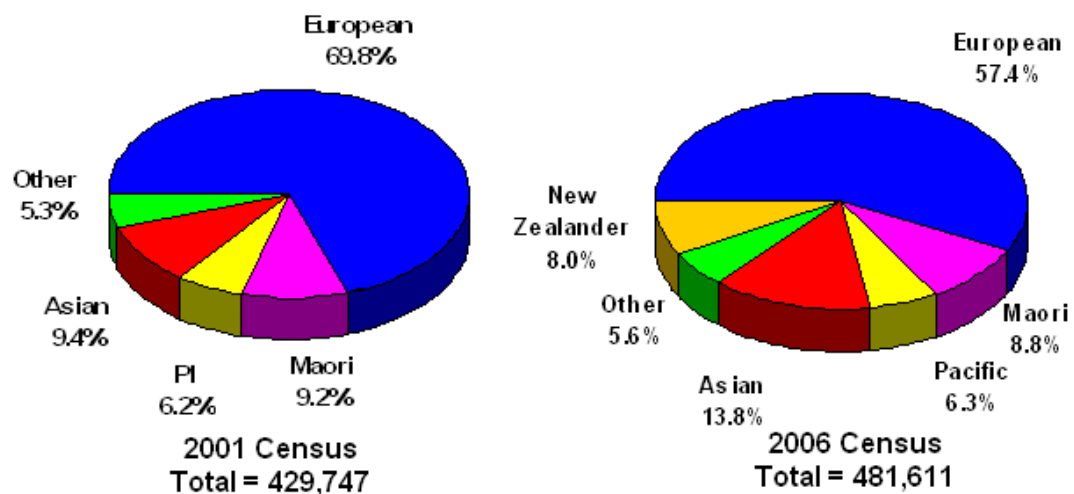
**Table 1 Top ten District Health Board areas with the highest number Pacific people, Census 2006 (total response ethnicity)**

DHB area	Pacific population (number)	Total Population (%)
Counties Manukau	82,917	19.1%
Auckland	45,555	11.3%
<b>Waitemata</b>	<b>30,441</b>	<b>6.3%</b>
Capital and Coast	19,017	7.1%
Hutt	9,858	7.2%
Canterbury	8,991	1.9%
Waikato	7,230	2.1%
Hawkes Bay	3,900	2.6%
Midcentral	3,381	2.1%
Otago	2,619	1.5%

### **Total and Pacific population in Waitemata**

There were 481,611 people who were usually resident in Waitemata in March 2006, making Waitemata the largest DHB in the country in terms of numbers of people. The population in this DHB grew from 429,747 in 2001 to 481,611 in 2006, an increase of 12.1%. Figure 2 shows the number of population by ethnicity for 2001 and 2006 in Waitemata. 6.3% or 30,441 of the Waitemata population in 2006 were Pacific. In 2006 the Pacific population was the fifth largest ethnic group in Waitemata.

**Figure 2 Waitemata district Population by Ethnicity (total response)**



### Total and Pacific population in Waitemata by age group

Figure 3 shows the percentage of total population in Waitemata by age group. Those aged 0-24 years made up 36% of the total population in Waitemata. Older people aged 65+ years made up 11% of the population.

**Figure 3 Total Waitemata population by age group, Census 2006**

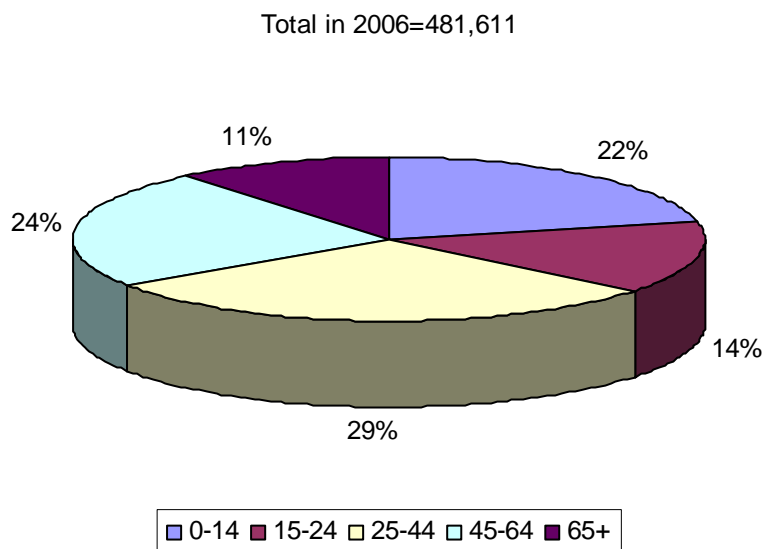
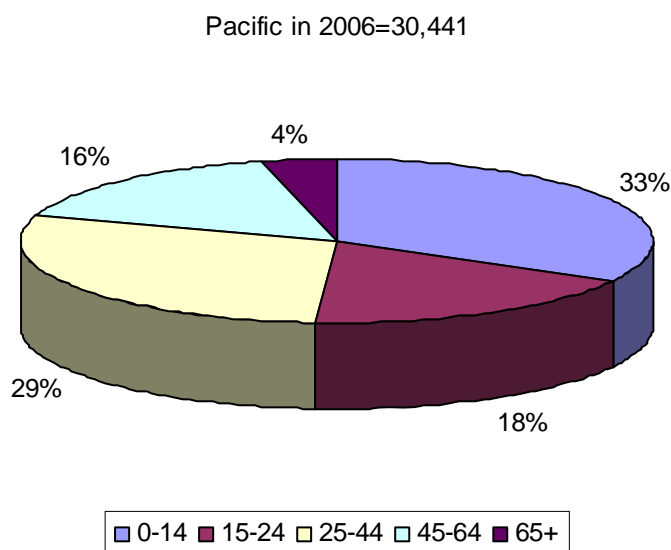


Figure 4 shows the percentage of Pacific population in Waitemata by age group. Those aged 0-24 years made up more than half (51%) of the Pacific population in Waitemata. Older people aged 65+ years made up only 4% of the Pacific population. Compared to the total population the Pacific population has a greater proportion of younger people and a smaller proportion of people aged 65 and over.



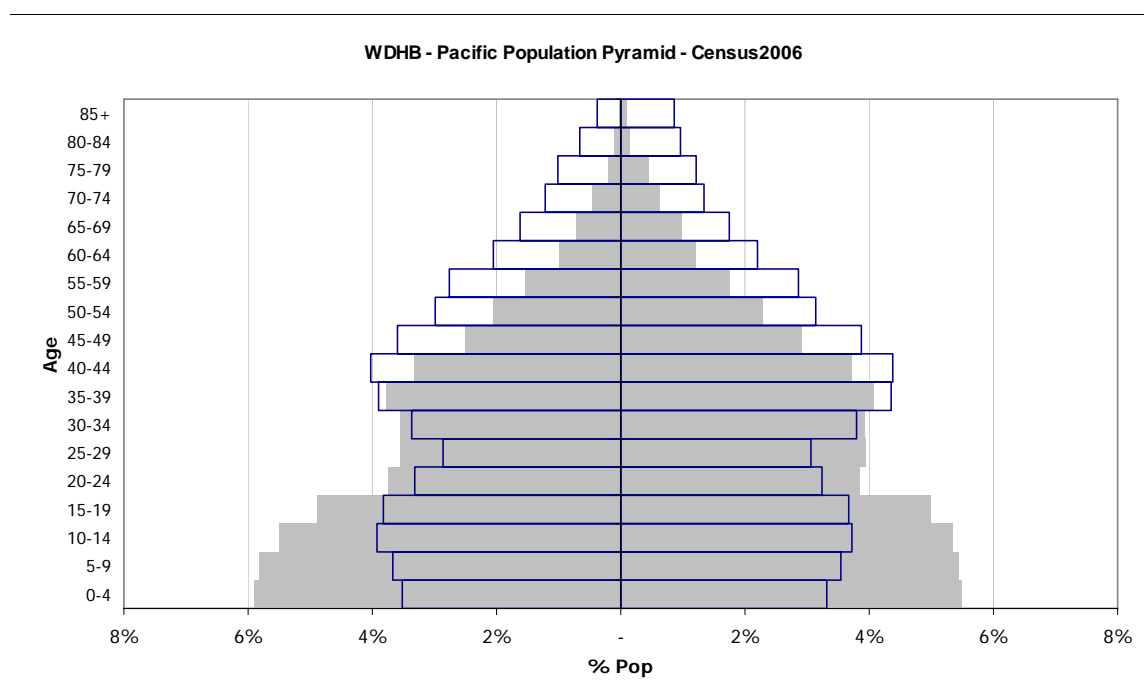
**Figure 4 Waitemata Pacific population by age group, census 2006**



### Total and Pacific population in Waitemata by age and gender

Figure 5 shows the population pyramid for the total population in Waitemata district (bars with solid outline) compared with the Pacific population in Waitemata district (grey shaded bars). The male population is on the left and the female population is on the right. Generally, there are more females than males in the over 35 age groups for both the total and Pacific populations. The highest percentages for both Pacific males and females were among those under 20 years old, whereas, for the total population, they were in the 35-39 and 40-44 age-bands.. The Pacific population also has considerably less people aged 40 and over compared to the total population.

**Figure 5 Waitemata total (outlined bars) and Pacific (grey shaded bars) populations by gender (male on left, female on right) age, Census 2006.**



## Live births

For women living in the Waitemata district, the rate of live births was similar to the New Zealand rate of births registered in 2007. Waitemata Pacific women had a higher rate of live births per 1000 women aged 15 to 49 years than total Waitemata and New Zealand women but a similar rate compared to New Zealand Pacific women.

**Table 2 Live births registered in 2007**

		<b>Pacific</b>	<b>Total</b>
<b>Waitemata</b>	<b>Live births</b>	899	7,829
	<b>Female population (15–49 years)</b>	8,702	129,058
	<b>Rate (per 1000)</b>	103.3	60.7
<b>New Zealand</b>	<b>Live births</b>	6,719	65,120
	<b>Female population (15–49 years)</b>	63,017	1,033,110
	<b>Rate (per 1000)</b>	106.6	63

Source: Health & Disability Intelligence Unit, Ministry of Health

## Population trends

In 2006 there was estimated to be around 34,300 Pacific people (after adjusting census figures for undercount, total response ethnicity) in Waitemata. This population is expected to increase by 30% by 2016 and number around 44,900. This growth is expected to continue at a rate of over 10% every five years and by 2031 Pacific people are expected to number around 62,000 or 8.9% of the total population in Waitemata. This will mean the Pacific population is expected to increase by 80% over the next 20 or so years.

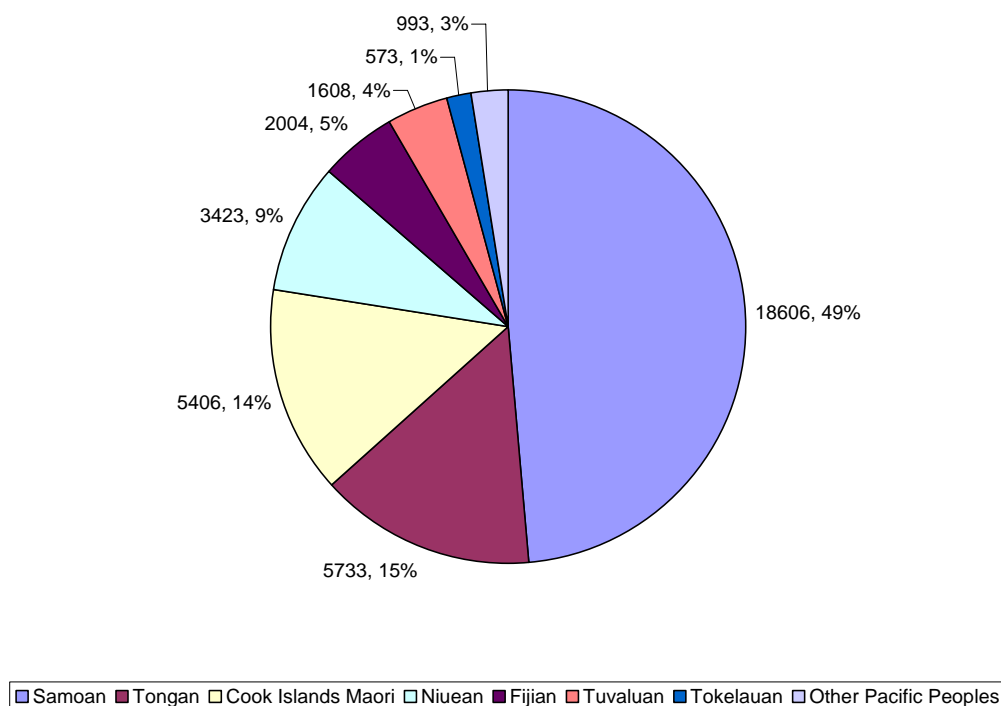
## Culture

Culture in its broadest sense refers to accepted patterns and norms of behaviour within identifiable groups in society. The most obvious cultural groups are those based on ethnic identity, but other societal groups based on, for example, social class, religion, age, occupation, etc may have their own culture. For many groups, particularly ethnic groups, culture was central to their health and well-being. While some aspects of a culture may have a negative effect on health, a strong cultural identity was generally thought of as an important resource for health.

## Population by Pacific ethnicity

Figure 6 shows the number and percentage of Pacific people by ethnic group for the Waitemata district. Samoans had the highest numbers and made up 49% of the Pacific population. Tongans were the second largest group at 15% and Cook Island Maori were the third largest group, making up 14% of the Pacific population. Niueans were the fourth largest group with 9% and Fijians were the fifth largest group with 5%. The sixth largest group were Tuvaluans with 4%, followed by Tokelauan at 1% and Other Pacific at 3%.

**Figure 6 Waitemata Pacific population by ethnic group (total response), Census 2006**



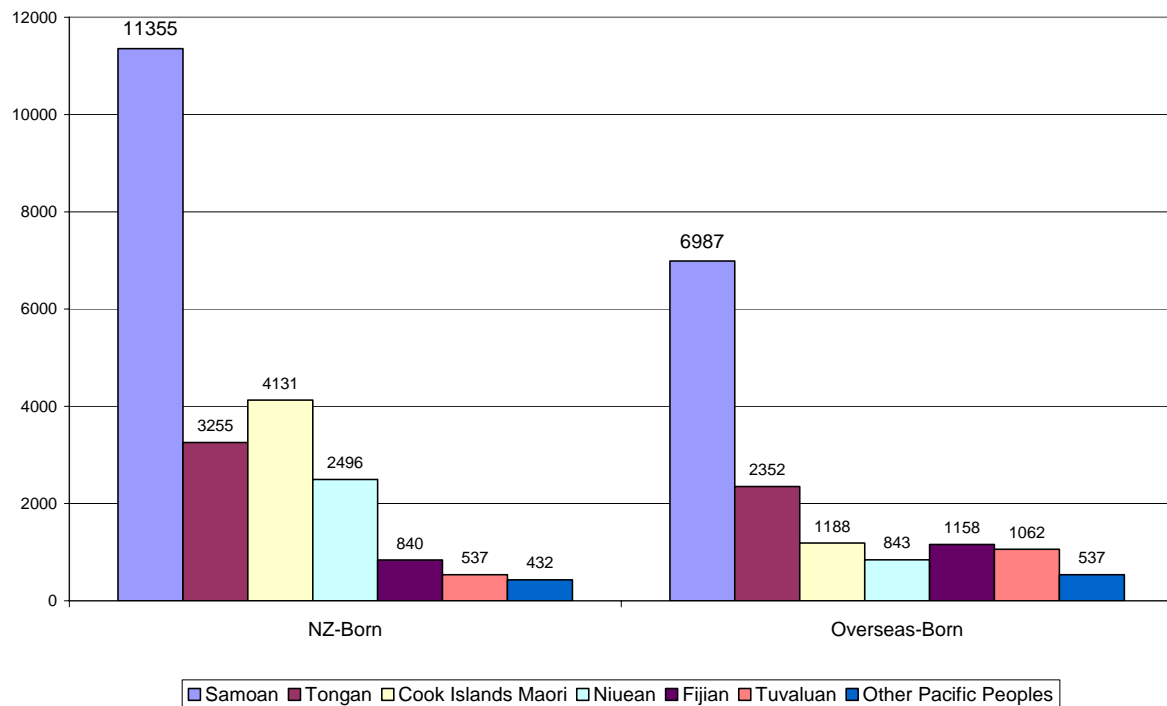
## New Zealand born and overseas born

Figure 7 shows the numbers of New Zealand born and overseas born Pacific people by ethnic group for the Waitemata district. Sixty percent of Pacific people were born in New Zealand, while 39% were born overseas.

Of those born in New Zealand, Samoans had the highest numbers and made up 54% of the New Zealand born Pacific population. Cook Island Maori were the second largest group at 20% and Tongans were the third largest group, making up 16% of the New Zealand born Pacific population. Niueans were the fourth largest group with 12%.

Of those born overseas, Samoans had the highest numbers and made up 50% of the overseas born Pacific population. Tongans were the second largest group making up 17%. Cook Islands Maori, Fijians and Tuvaluans were the next three largest groups making up around 8.6%, 8.3% and 7.6% of the overseas born Pacific population.

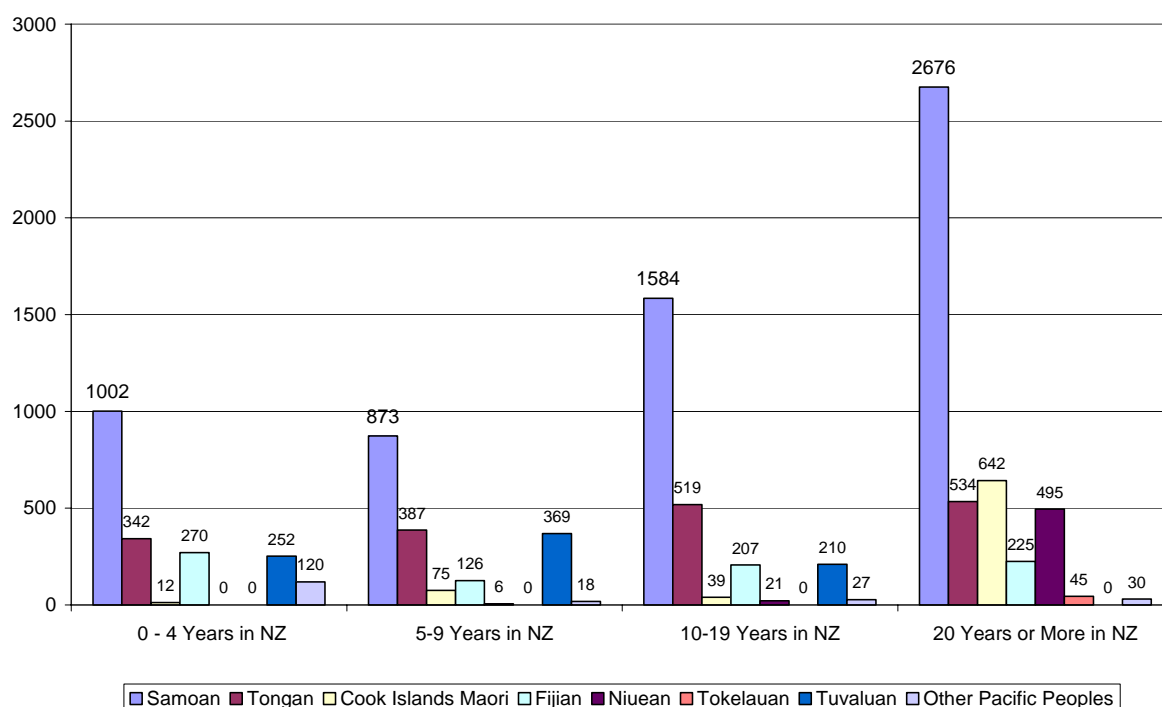
**Figure 7 Waitemata Pacific New Zealand born and Overseas born by ethnic group (total response), Census 2006**



## Time in New Zealand

Around 35% of Pacific people born overseas have lived in New Zealand for 20 or more years, while 33% had been in New Zealand 10 years or less and 21% for between 10 and 19 years. Figure 8 shows the number of years a person has been living in New Zealand by ethnic group. Of those who had been in New Zealand for 20 or more years 55% were Samoan, 13% Cook Islands Maori, 11% Tongan and 10% Niuean. Of those who had been in New Zealand 10 years or less 41% were Samoan, 16% Tongan, 14% were Tuvaluan and 9% Niuean.

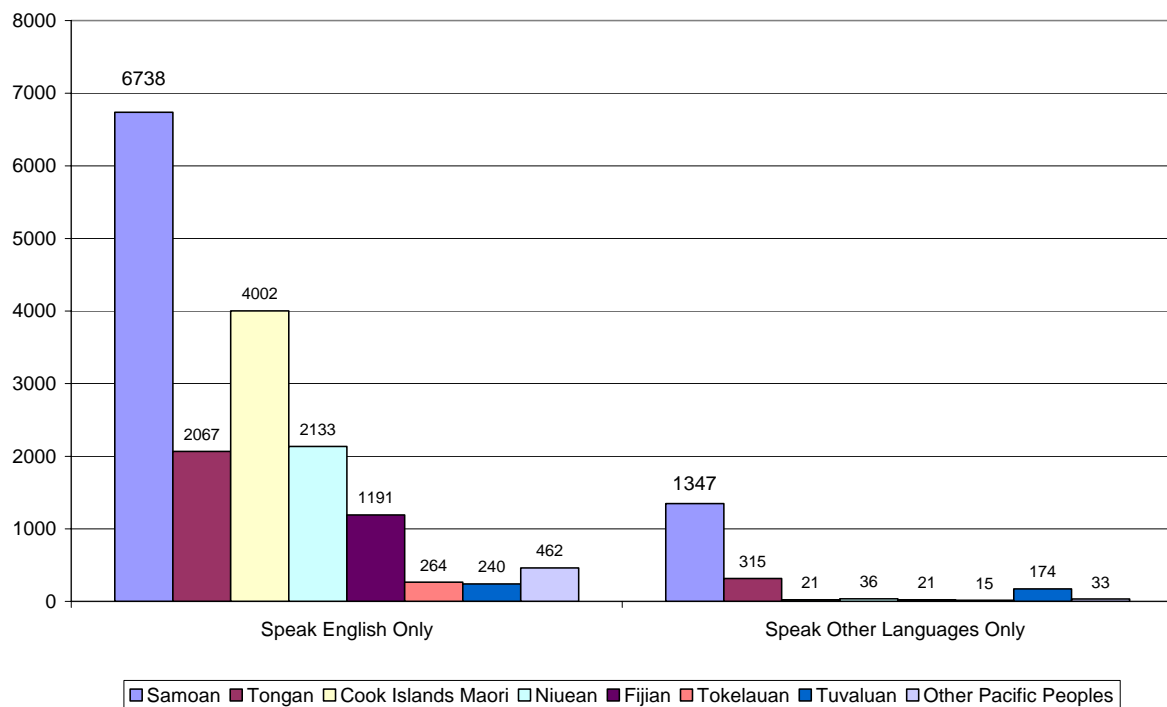
**Figure 8 Years in New Zealand among overseas-born Waitemata Pacific people by ethnic group (total response), Census 2006**



## Speak English only and non-English speakers

Forty three percent of Pacific people in the Waitemata district speak English only and 47% speak English and another language, while only 6% speak only another language other than English. Figure 9 shows the numbers who speak English only and another language only. Of those who speak English only, Samoans (44%), Cook Islanders (26%), Tongans (14%) and Niueans (14%) are the biggest groups. Of those who speak another language only Samoans (70%), Tongans (16%) and Tuvaluans (9%) are the biggest groups.

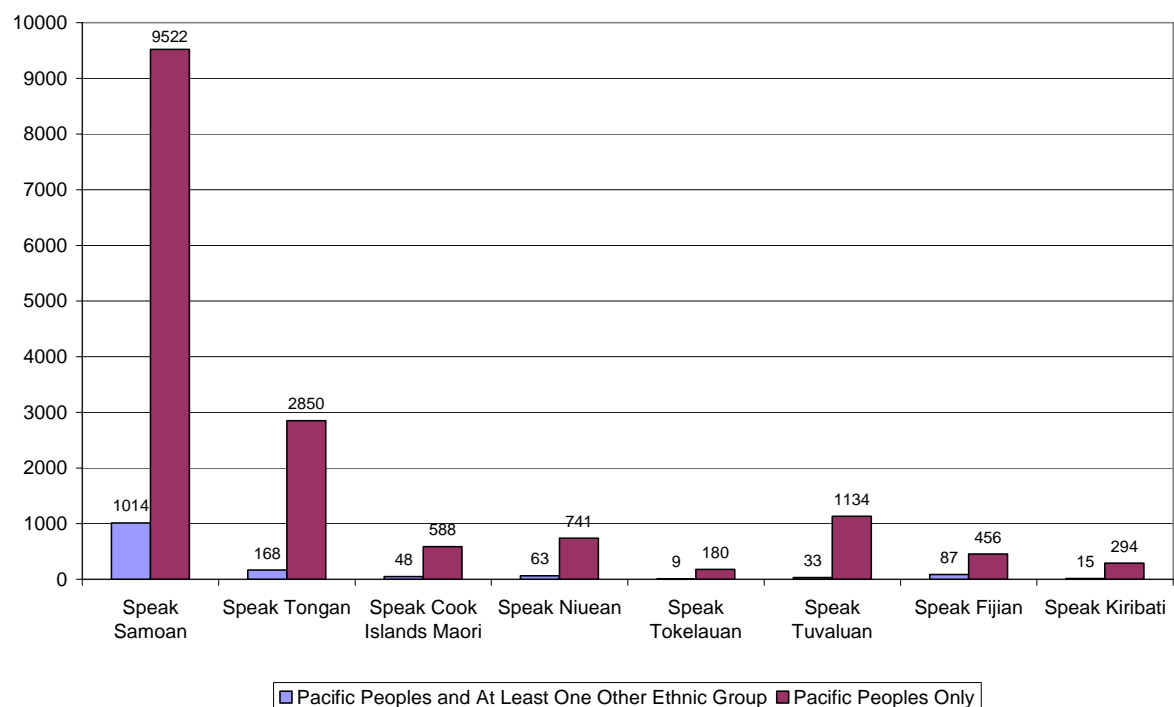
**Figure 9 Waitemata Pacific who speak English only and are non-English by ethnic group (total response), Census 2006**



## Speaks Particular Pacific Language

Figure 10 shows the numbers of Pacific who can speak a particular Pacific language by ethnic group. There are around 10500 Samoans who can speak Samoan, over 3000 Tongans who can speak Tongan and over 1000 Tuvaluans who can speak Tuvaluan.

**Figure 10 Waitemata Pacific who speak a Pacific Language by ethnic group (total response), Census 2006**



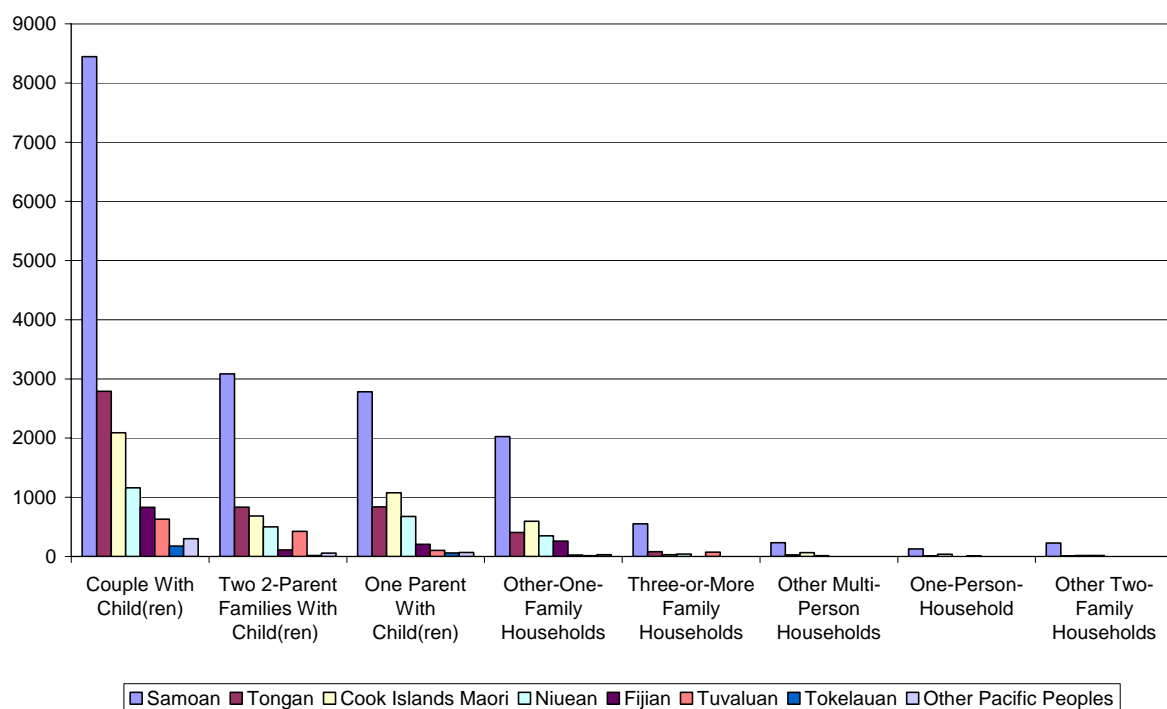
## Family

### Family structure

Figure 11 shows the number of Pacific people living within different family structures by ethnic group. The largest structure-type was a couple with children (52%, 15768), followed by one parent with children (19%, 5685), then two 2-parent families with children (18%, 5559), other one-family households (13%, 3987), and three or more family households (996, 3%). There were also smaller numbers of Pacific people living in other multiple person households (2%, 633), one-person households (1%, 420) and other two family households (1%, 405).

For total Waitemata the largest structure-type was a couple with children (40%, 191,940), followed by other one-family households (30%, 143,598), then one parent with children (9%, 41,634), one-person households (6%, 30,678) and two 2-parent families with children (5%, 21,636). There were also smaller numbers of total Waitemata people living in other multiple person households (3%, 16,116), other two family households (1%, 5163) and three or more family households (1251, 0.3%).

**Figure 11 Numbers of different Family structures of Waitemata Pacific households by ethnic group (total response), Census 2006**



## Context

Context includes social factors, economic factors and behavioural factors.

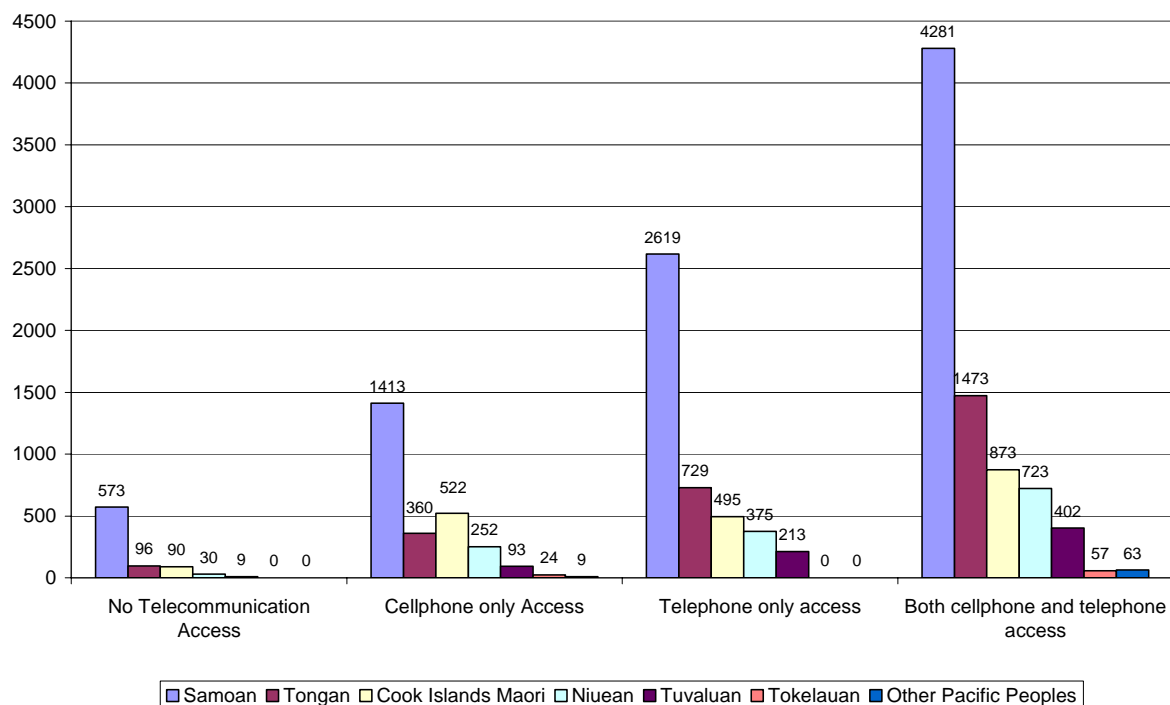
## Social Factors

### Social Support

#### Access to telecommunications

Figure 12 shows access to telecommunications (includes phone, cellphone and internet) by Pacific ethnic group. Around 3% (795) of Pacific have no access to telecommunications. Compared with 2% (2124) of the total Waitemata population. Of the Pacific people who reported no telecommunication access 70% (573) were Samoan.

**Figure 12 Telecommunication Access for Waitemata Pacific by ethnic group (total response), Census 2006**

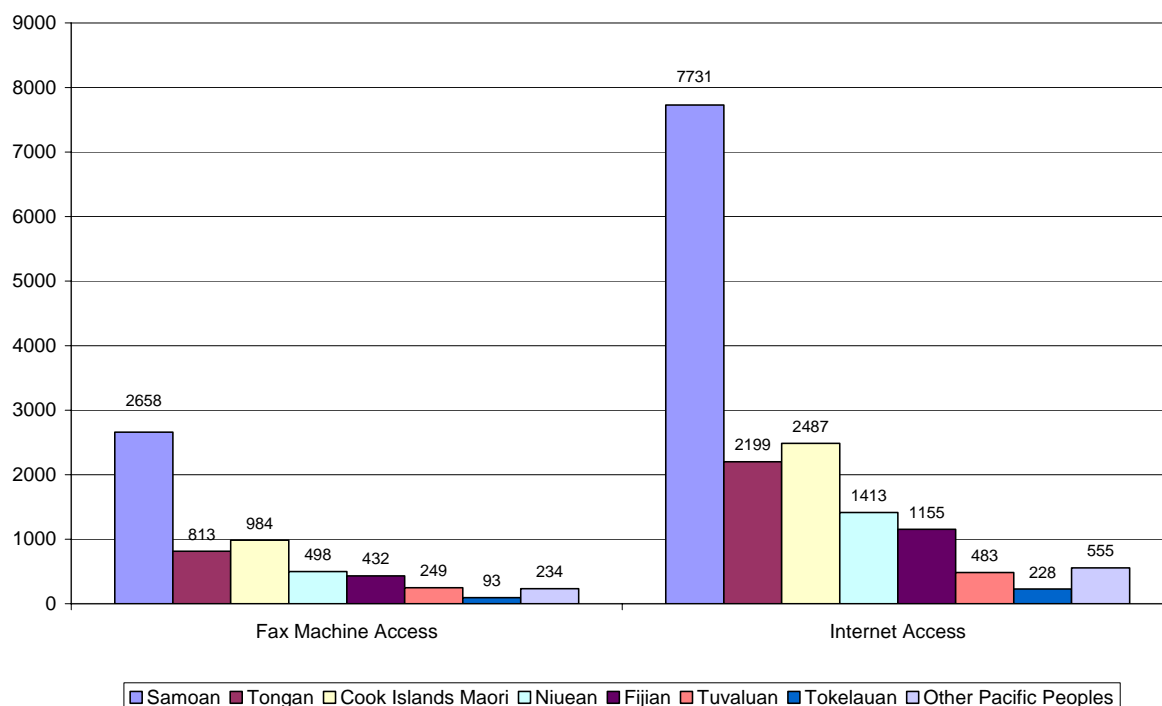


#### Fax and internet access

Figure 13 shows fax and internet access by Pacific ethnic group. Around 20% (5961) and 53% (16250) of Pacific people had fax and internet access respectively compared to 33% (157,188) and 70% (338,919) of the total Waitemata population respectively. Of Pacific people with fax access 45% (2658) were Samoan and of the Pacific people with internet access 48% (7731) were Samoan.



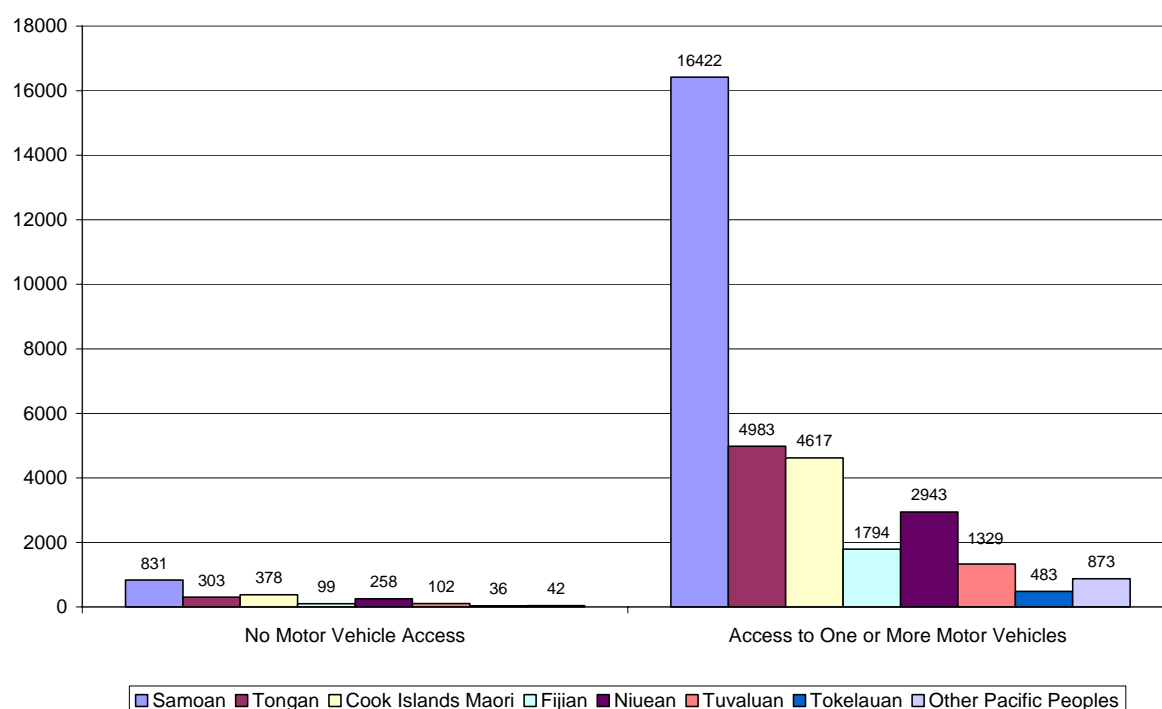
**Figure 13 Fax and internet access for Waitemata Pacific by ethnic group (total response), Census 2006**



### Access to motor vehicles

Figure 14 shows Pacific people which have no access to use of a motor vehicle and those with access to at least one motor vehicle by ethnic group. Around 6% (1860) of Pacific people have no motor vehicle access compared to 3% (14,583) of the total Waitemata population. Of Pacific without access to a motor vehicle 45% (831) are Samoan.

**Figure 14 Access to motor vehicles for Waitemata Pacific by ethnic group (total response), Census 2006**

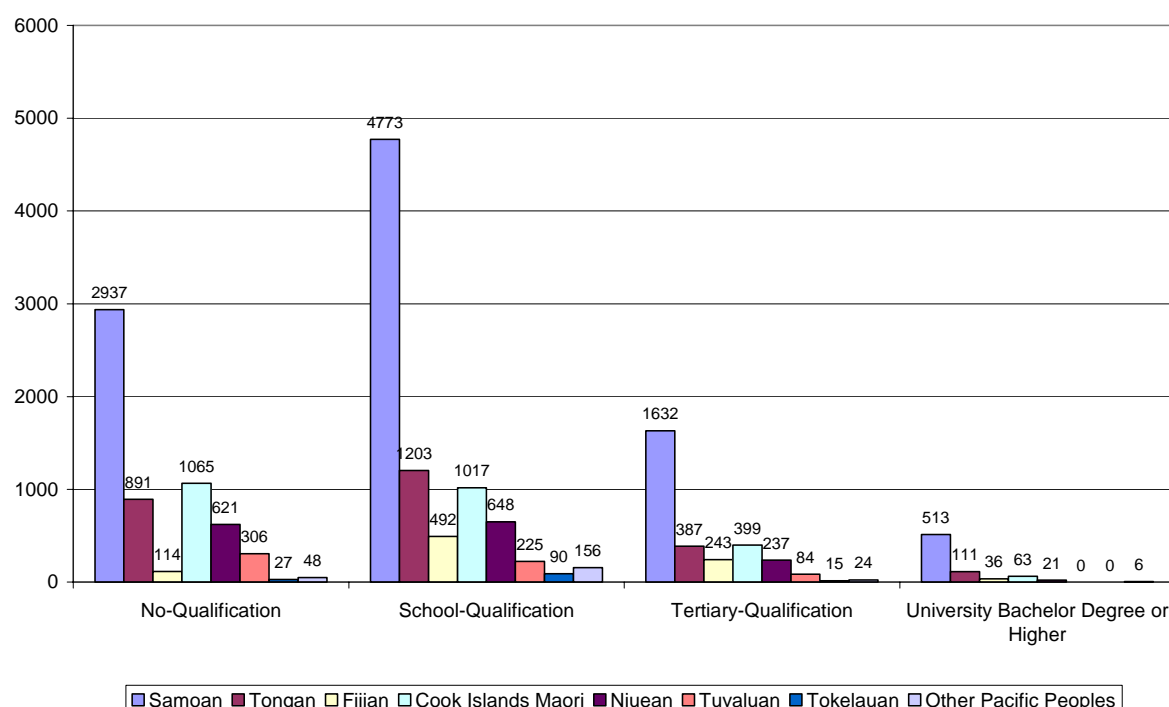


## Economic factors

### Education

Figure 15 shows numbers with different highest educational qualifications by ethnic group. Around 26% (6000) of Pacific people had no qualification, 37% (8500) had a school qualification, 13% (3000) had a tertiary qualification, and 3% (750) had a University Bachelor degree or higher as their highest qualification, compared with the total Waitemata population of which 12% (49,434) had no qualification, 29% (115,851) had a school qualification, 16% (64,968) had a tertiary qualification, and 10% (39,693) had a University Bachelor degree or higher as their highest qualification.

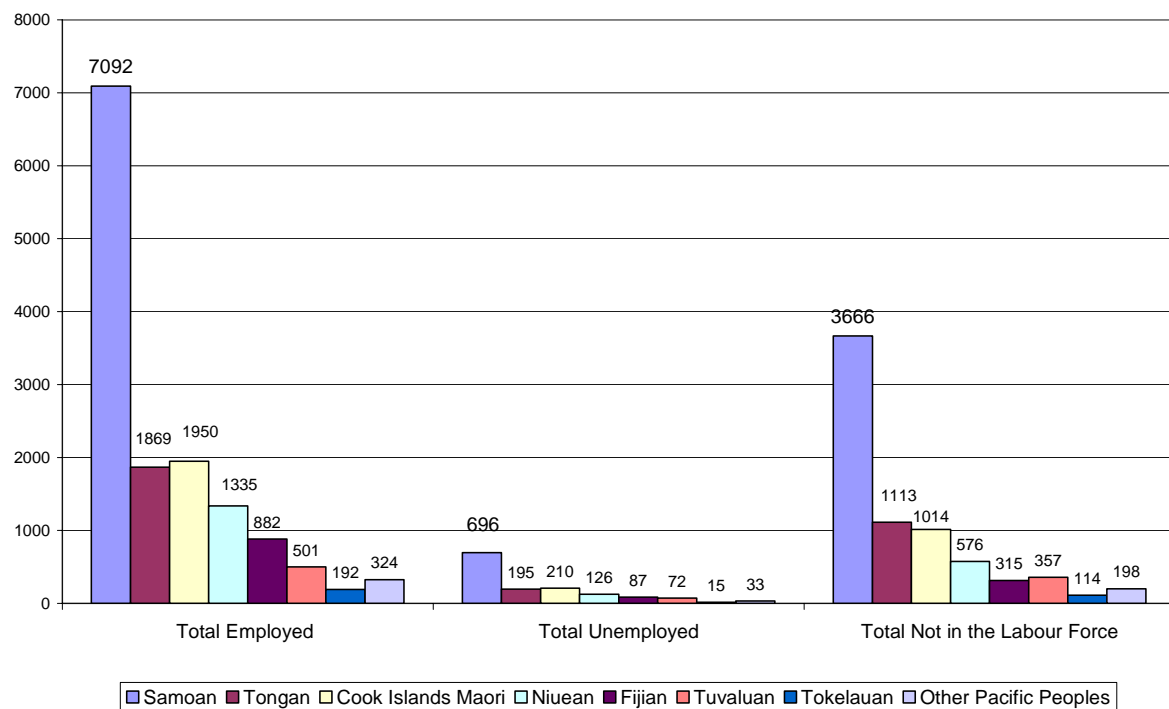
**Figure 15 Numbers (aged 15+) with different highest education qualifications for Waitemata Pacific by ethnic group (total response), Census 2006**



### Employment

Figure 16 shows employment status by ethnic group. Around 61% (14000) of Pacific people are employed and only 6% (1400) are unemployed with a further 27% (6300) not in the workforce. This compares to 60% (239,103) employed, 3% (11799) unemployed, and 28% (109416) not in the workforce for the total Waitemata population.

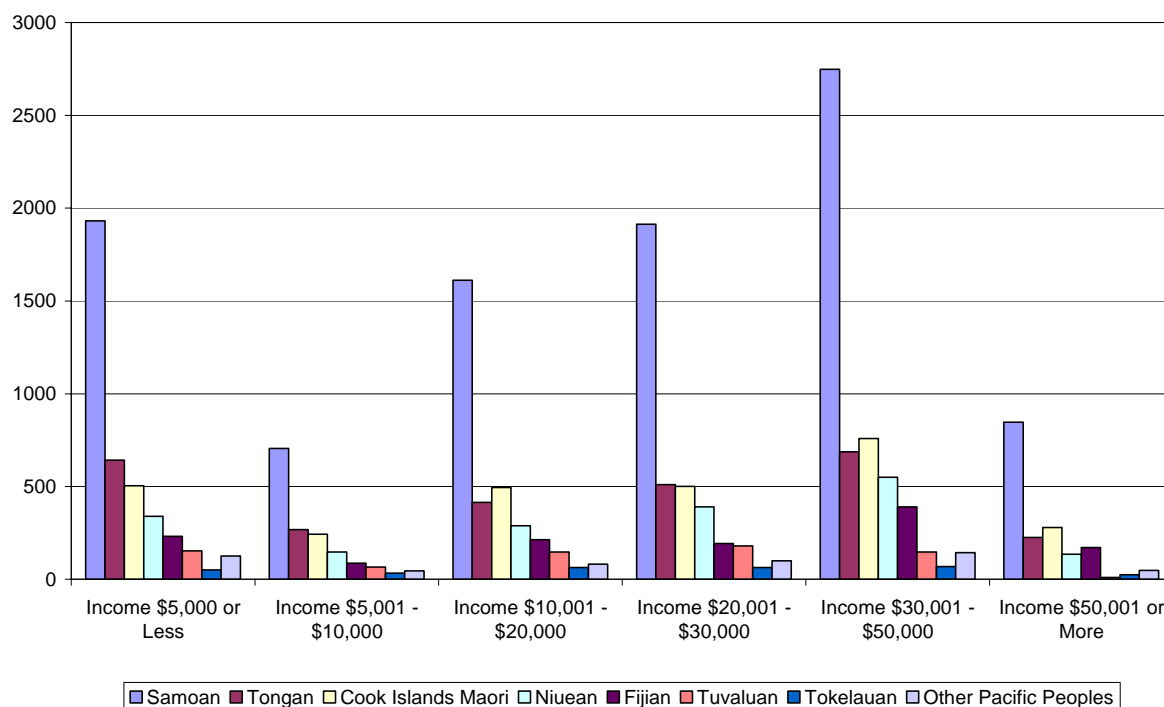
**Figure 16 Numbers (aged 15+) with different employment status for Waitemata Pacific by ethnic group (total response), Census 2006**



## Income

Figure 17 shows income by ethnic group. Around 36% (8358) of Pacific people in Waitemata earn less than \$20,000 per year compared to 34% (135,927) of the total Waitemata population. Of those who earn less than \$20,000 per year, 31% (4248) are Samoan, 11% (1323) are Tongan and 11% (1243) are Cook Islands Maori.

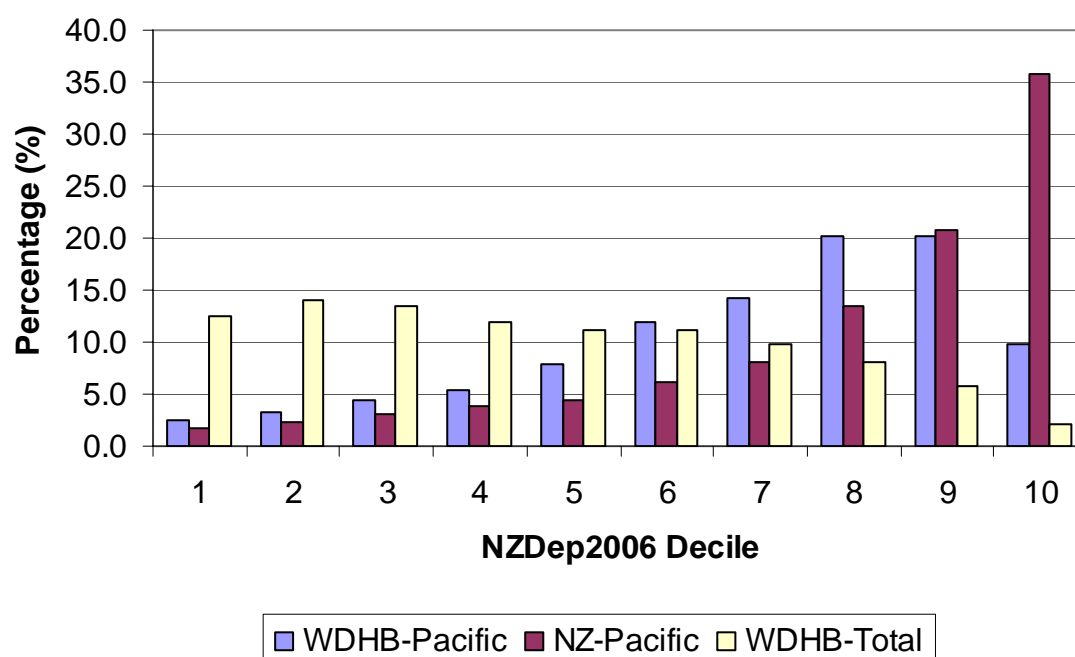
**Figure 17 Annual personal Income (pre-tax for Individuals aged 15+) for Waitemata Pacific by ethnic group (total response), Census 2006**



## Deprivation

Figure 18 shows deprivation (NZDep2006 – see definition under methodological issues) for Waitemata Pacific, Waitemata total and New Zealand Pacific populations. Over two-thirds (64%) of Waitemata Pacific people and close to eight out of ten Pacific people in New Zealand (79%) live in the most deprived neighbourhoods (deciles 7, 8, 9 and 10), while only 26% of the total Waitemata population live in the most deprived neighbourhoods.

**Figure 18: Waitemata and New Zealand populations by NZDep2006 Deciles, Census 2006**



## Behavioural Factors

### Smoking

#### Daily smoking

Table 3 shows the prevalence of current daily smokers from people participating in the New Zealand Health Survey 2006/07. The current daily smoking rate for Pacific people in Waitemata was around 19%. Smoking rates among Pacific (both males and females) were similar to both the rate for the total population in Waitemata and the New Zealand Pacific rates (for both males and females).

**Table 3 Age-standardised prevalence rates (percent, with 95% confidence intervals) of current daily smokers, 15+ years, by ethnicity, 2006/07 NZHS**

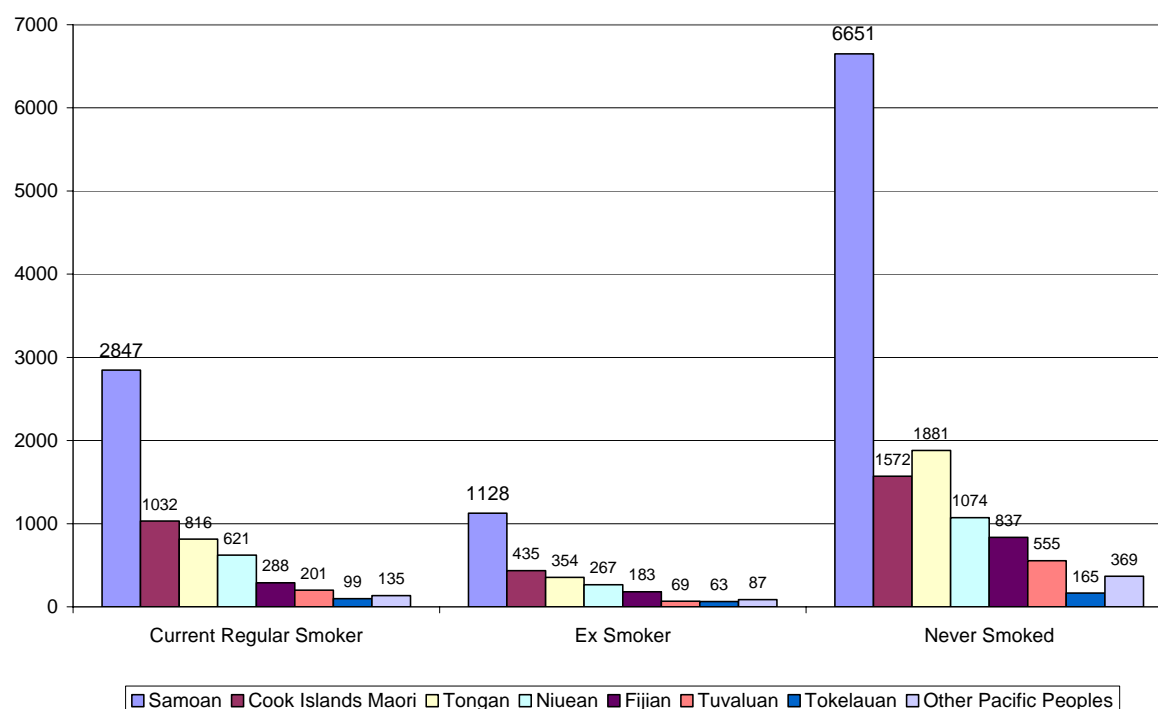
Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	14.9 (10.2 - 20.6)	12.9 (10.0 - 16.4)	20.6 (16.6–25.1)
Male	23.0 (17.4 - 29.5)	14.7 (11.7 - 18.1)	31.9 (26.7–37.4)
Total	18.7 (14.6 - 23.4)	13.8 (10.9 - 16.6)	26.0 (22.7–29.5)

Source: Health & Disability Intelligence Unit, Ministry of Health

#### Regular smoking by Pacific ethnic group

Figure 19 shows the number of regular smokers by ethnic group. Around 26% (6000) of Pacific people were regular smokers. Of these 47% were Samoan, 17% Tongan, 14% Cook Islands Maori, 10% Niuean, 5% Fijian, 3% Tuvaluan, 2% Tokelauan, and 2% Other Pacific. Within each ethnic group the highest proportions of regular smokers with Cook Islands Maori (32%), Niuean (30%), 29% Tokelauan, Samoan and Tongan (25% each), Tuvaluan (22%) and Fijian and Other Pacific (21% each).

**Figure 19 Numbers (aged 15+) of regular smokers and non-smokers for Waitemata Pacific by ethnic group (total response), Census 2006**



## Nutrition

### 3+ vegetables a day

Table 4 shows around 38 percent of Pacific people in Waitemata ate three or more servings of vegetables on average each day, which was not statistically different to rates in the New Zealand Pacific population but was lower than the total Waitemata rate, adjusted for age. The rates for Pacific females were significantly lower than the rate for females in the total Waitemata population, adjusted for age.

**Table 4 Age-standardised prevalence rates (percent, with 95% confidence intervals) of having 3 or more servings of vegetables, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	39.6 (32.3 - 47.2)	59.1 (53.9 - 64.2)	45.8 (40.1–51.6)
Male	36.1 (28.4 - 44.4)	48.7 (43.6 - 53.8)	41.8 (35.5–48.3)
Total	37.9 (31.4 - 44.8)	54.1 (49.4 - 58.9)	43.9 (39.2–48.7)

Source: Health & Disability Intelligence Unit, Ministry of Health

## 2+ fruit a day

Table 5 shows that close to 60% of Pacific people in the Waitemata district ate two or more servings of fruit on average each day, which was similar to both the New Zealand Pacific and the total Waitemata population rates, adjusted for age. All rates were significantly higher among females than males, adjusted for age.

**Table 5 Age-standardised prevalence rates (percent, with 95% confidence intervals) of having 2 or more servings of fruit, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	67.0 (60.9 - 72.8)	69.5 (65.6 - 73.2)	65.5 (60.3–70.4)
Male	51.2 (43.8 - 58.5)	51.0 (47.2 - 54.8)	50.0 (43.3–56.7)
Total	59.5 (54.3 - 64.6)	60.6 (57.3 - 63.9)	58.1 (53.9–62.2)

Source: Health & Disability Intelligence Unit, Ministry of Health

## Breastfeeding

Breastfeeding is a part of laying the foundations for a healthy life from infancy and childhood. Exclusive breastfeeding means that an infant has only consumed breast milk from the breast or expressed breast milk and prescribed medicines from birth, but no water, formula or other liquid or solid food. Full breastfeeding is when an infant has consumed breast milk and only a minimal amount of water and prescribed medicines within the last 48 hours, but no other liquids or solids during that time period.

Tables 6 and 7 show the proportion of all the babies had been exclusively or fully breastfed for 10–16 weeks and 16 weeks–8 months from birth respectively. Waitemata Pacific exclusively or fully breastfed rates are higher the New Zealand Pacific rates but less than the total Waitemata rates.

**Table 6 Exclusive or full breastfeeding for 10–16 weeks, percent, by ethnicity, 2007**

Ethnicity	Waitemata	New Zealand
Pacific	46.5	43.0
Total	55.4	53.7

Source: Health & Disability Intelligence Unit, Ministry of Health

**Table 7 Exclusive or full breastfeeding for 16 weeks–8 months, percent, by ethnicity, 2007**

<b>Ethnicity</b>	<b>Waitemata</b>	<b>New Zealand</b>
Pacific	19.0	17.9
Total	24.1	25.5

Source: Health & Disability Intelligence Unit, Ministry of Health

### Physical Activity

Table 8 shows that fewer than half of Pacific peoples in Waitemata district undertook regular physical activity, which was similar to both the rates for the total Waitemata population or the New Zealand Pacific population, adjusted for age.

**Table 8 Age-standardised prevalence rates (percent, with 95% confidence intervals) of doing regular physical activity, 15+ years, by ethnicity, 2006/07 NZHS**

<b>Gender</b>	<b>Waitemata Pacific</b>	<b>Waitemata Total</b>	<b>NZ Pacific</b>
<b>Female</b>	39.8 (32.0 - 47.9)	44.0 (38.9 - 49.1)	43.5 (37.1–50.1)
<b>Male</b>	48.4 (40.8 - 56.1)	50.2 (45.2 - 55.3)	53.0 (46.9–59.0)
<b>Total</b>	43.9 (37.4 - 50.6)	47.0 (42.3 - 51.6)	48.0 (43.2–52.8)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Obesity

Table 9 shows the prevalence of obesity in Waitemata Pacific males and females was significantly lower than the national Pacific prevalence rates for males and females, adjusted for age. The proportions of Pacific males and female in Waitemata who were obese were significantly higher than the proportion of obese males and females in the total Waitemata district, adjusted for age.



**Table 9 Age-standardised prevalence rates (percent, with 95% confidence intervals) of obesity, 15+ years, by ethnicity 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	47.9 (41.6 - 54.2)	20.1 (16.6 - 24.1)	61.7 (56.2–66.9)
Male	47.3 (41.1 - 53.5)	19.4 (15.8 - 23.4)	60.9 (55.6–66.0)
Total	47.6 (42.4 - 52.8)	19.7 (16.4 - 23.1)	61.3 (57.2–65.2)

Source: Health & Disability Intelligence Unit, Ministry of Health **Definitions** Information about obesity and overweight was drawn from the 2006/07 New Zealand Health Survey. Participants in the survey aged two years and over were weighed and had their height measured. From these measurements, body mass index (BMI) was calculated (weight in kilograms divided by height in metres squared), and international cut-off points were used to classify participants as obese or overweight. For more information see *A Portrait of Health – Key Results from the 2006/07 New Zealand Health Survey* (Ministry of Health, 2008).

## Hypertension

Table 10 shows that the rate of Waitemata Pacific people who reported taking medication for high blood pressure was similar to both the national Pacific and the total Waitemata prevalence, adjusted for age.

**Table 10 Age-standardised prevalence rates (percent, with 95% confidence intervals) of medicated high blood pressure, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	9.3 (6.5–12.8)	12.3 (10.1–14.6)	8.5 (6.3–11.1)
Male	9.2 (6.1–13.3)	11.5 (9.4–14.0)	8.4 (5.8–11.7)
Total	9.3 (6.6–12.5)	11.9 (9.9–13.9)	8.4 (6.5–10.7)

Source: Health & Disability Intelligence Unit, Ministry of Health

## High cholesterol

Table 11 shows that the rate of Waitemata Pacific people who reported taking medication for high cholesterol was similar to both the national Pacific and the total Waitemata prevalence, adjusted for age.

**Table 11 Age-standardised prevalence rates (percent, with 95% confidence intervals) of medicated high cholesterol, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	6.2 (3.3–10.4)	5.9 (4.3–7.9)	6.1 (3.5–9.7)
Male	4.9 (2.6–8.5)	7.9 (6.2–9.9)	4.9 (2.8–7.7)
Total	5.6 (3.3–8.7)	6.9 (5.3–8.4)	5.5 (3.7–7.9)

Source: Health & Disability Intelligence Unit, Ministry of Health

## Hazardous drinking

Table 12 shows that the prevalence of hazardous drinking for Waitemata Pacific people was similar to both the national Pacific and the total Waitemata prevalence, adjusted for age. Note that the prevalence of hazardous drinking was less for females compared to males in both the total Waitemata and New Zealand Pacific populations but that this difference was not statistically significant for the Waitemata Pacific population.

**Table 12 Age-standardised prevalence rates (percent, with 95% confidence intervals) of hazardous drinking, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	14.3 (5.3 - 29.1)	8.3 (5.7 - 11.0)	12.0 (8.7–15.3)
Male	31.2 (15.7 - 50.4)	27.7 (22.2 - 33.3)	32.1 (26.6–37.7)
Total	22.0 (13.1 - 33.3)	17.7 (14.4 - 20.9)	21.6 (18.5–24.7)

Source: Health & Disability Intelligence Unit, Ministry of Health **Notes:** In the 2006/07 New Zealand Health Survey, adult participants who had an alcoholic drink in the previous twelve months were asked ten questions about their alcohol use, covering the volume and frequency of alcohol consumed, alcohol related problems and abnormal drinking behaviour. These ten questions were developed by the WHO and are known as the Alcohol Use Disorders Identification Test (AUDIT). The international definition of hazardous drinking was defined as an AUDIT score greater than or equal to 8, and was the definition used here. This represents an established pattern of drinking that carries a high risk of future damage to physical or mental health.

### Regular marijuana use

Table 13 shows that the prevalence of marijuana use over a twelve month period for Waitemata Pacific people was similar to the rates for the total Waitemata population and for the New Zealand Pacific population, adjusted for age.

**Table 13 Age-standardised prevalence rates (percent, with 95% confidence intervals) of marijuana use in 12 months prior to interview for the 2002/03 NZHS, 15+ years, by ethnicity**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	12.2 (2.2 - 33.7)	12.7 (8.8 - 16.6)	12.0 (8.7–15.3)
Male	14.0 (4.8 - 29.6)	18.0 (12.9 - 23.2)	32.1 (26.6–37.7)
Total	13.1 (5.3 - 25.4)	15.3 (12.1 - 18.5)	21.6 (18.5–24.7)

Source: Health & Disability Intelligence Unit, Ministry of Health

## Environment

### Environmental Factors

#### Geography of Waitemata district

The land area of Waitemata district is 2,873 square kilometres. There are three territorial authorities: Rodney District, North Shore City and Waitakere City.

Waitakere City and North Shore City are the most densely populated and comprise the southern part of Waitemata. Rodney District has a comparatively sparse population but accounts for most of the land area. Waitemata district is bound by coast on either side which is interrupted by the large harbours of Kaipara, Manukau and Waitemata.

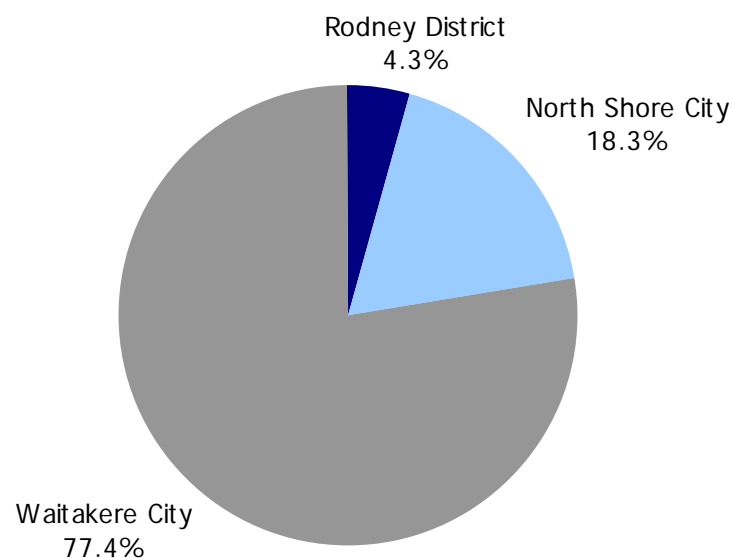
The land and land use vary dramatically across the district, from heavily urbanised in the south east, to the natural environment of the Waitakere ranges to the south west. Previously rural areas like Albany are rapidly becoming more urban.

The two main cities of the district are Waitakere, the fifth largest city in the country, and North Shore, which is the fourth largest. People frequently commute between these two cities and Auckland.

#### Domicile of Pacific Population in Waitemata

Figure 20 shows the percentage of Pacific population in Waitemata by Territorial (Local) Authority (TLA). Waitakere City had the highest Pacific population at 77.4% or 23,538 Pacific people.

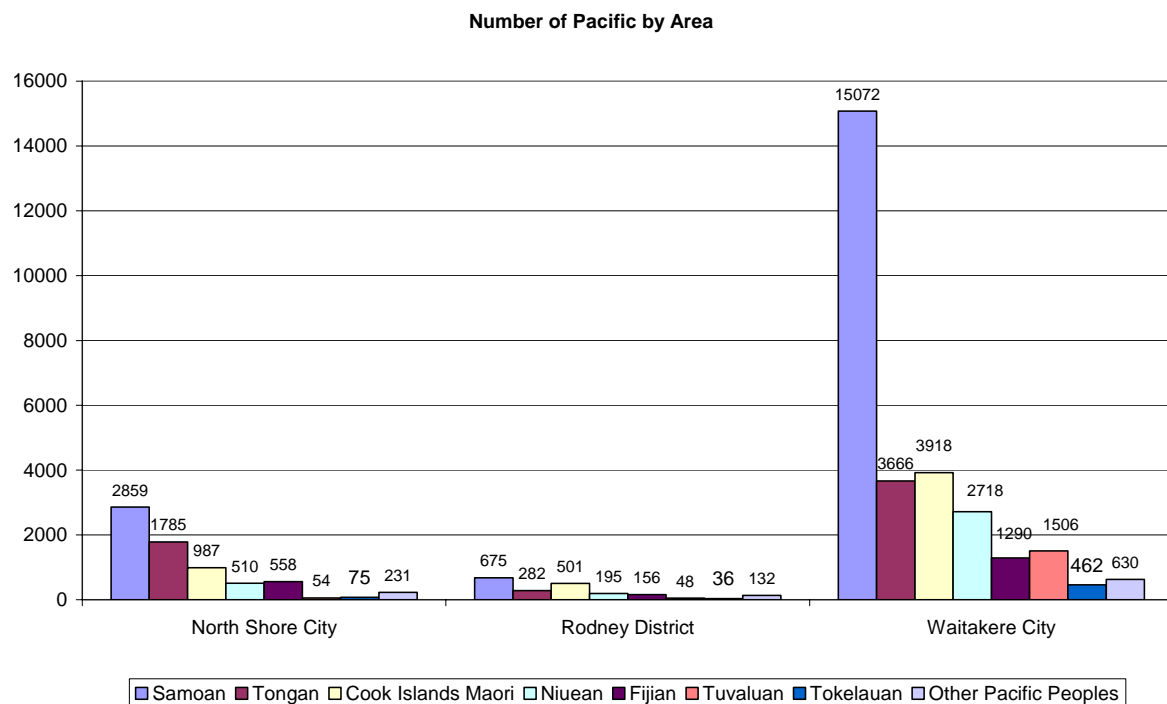
**Figure 20 Pacific population in Waitemata by area of residence, Census 2006**



#### Pacific ethnic groups by Territorial (Local) Authority

Figure 21 shows that Waitakere City has more Pacific people of each ethnic group than both North Shore and Rodney combined.

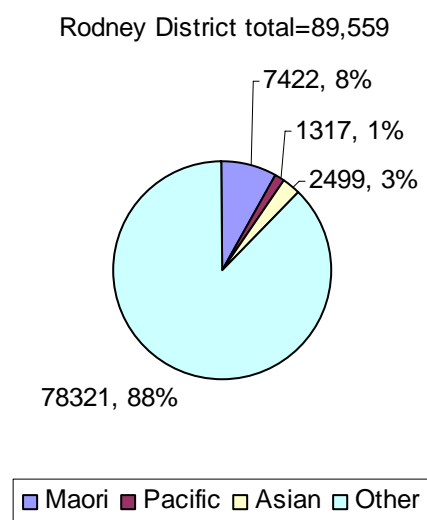
**Figure 21 Waitemata Pacific within each territorial authority by ethnic group (total response), Census 2006**



### Pacific population in Rodney District

There were 89,559 people living in Rodney District in 2006, an increase of 18% from 2001. Figure 22 shows the number of people by ethnicity in Rodney District. Pacific people made up only 1% (1317) of the population in the district in 2006, the smallest population.

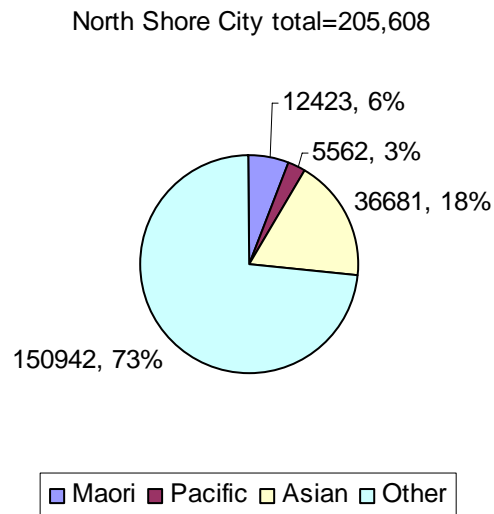
**Figure 22 Waitemata population by ethnicity, Rodney District, Census 2006**



### Pacific population in North Shore City

There were 205,608 people living in North Shore City in 2006, an increase of 11% from 2001. Figure 23 shows the number of people by ethnicity in North Shore City. Pacific people made up 3% (5562) of population in this city in 2006, the smallest population.

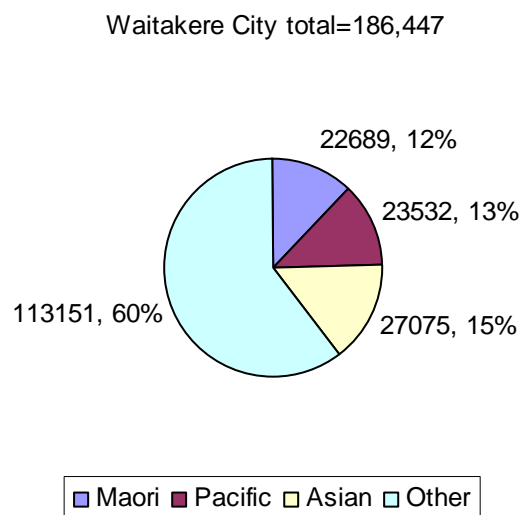
**Figure 23 Waitemata population by ethnicity, North Shore City, Census 2006**



### Pacific population in Waitakere City

There were 186,447 people living in Waitakere City in 2006, an increase of 11% from 2001. Figure 24 shows the number of people by ethnicity in Waitakere City. Pacific made up 13% (23,532) of population in this city 2006, the third largest population.

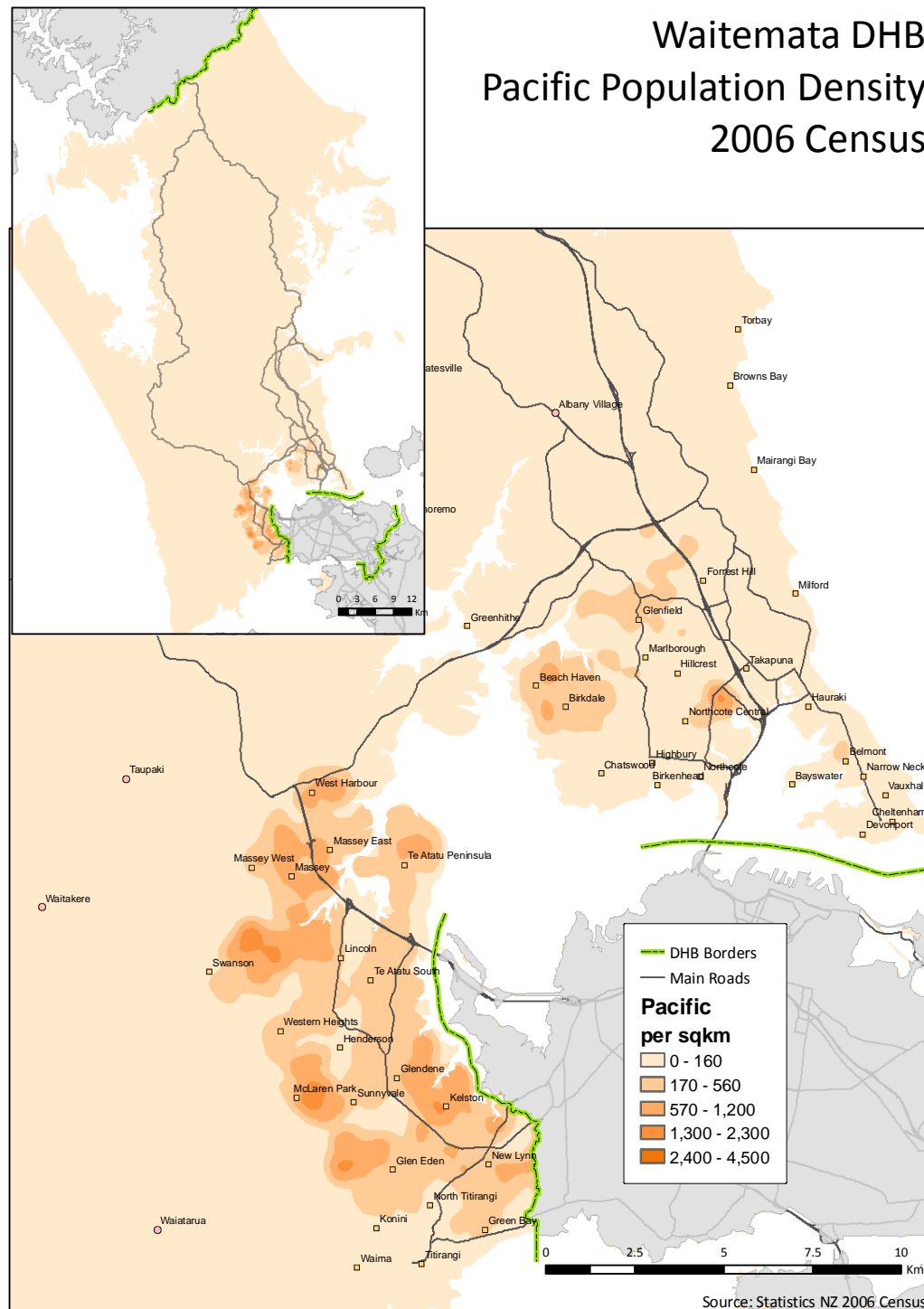
**Figure 24 Waitemata population by ethnicity, Waitakere City, Census 2006**



## Population density

Figure 25 shows Pacific population density within Waitemata. There are pockets of Pacific people in Massey, West Harbour, Ranui, Te Atatu North, Glen Eden, Henderson, Kelston, Glendene and New Lynn in Waitakere City and in Beach Haven, Birkdale, Glenfield, and Northcote in North Shore City.

**Figure 25 Waitemata Pacific population density**

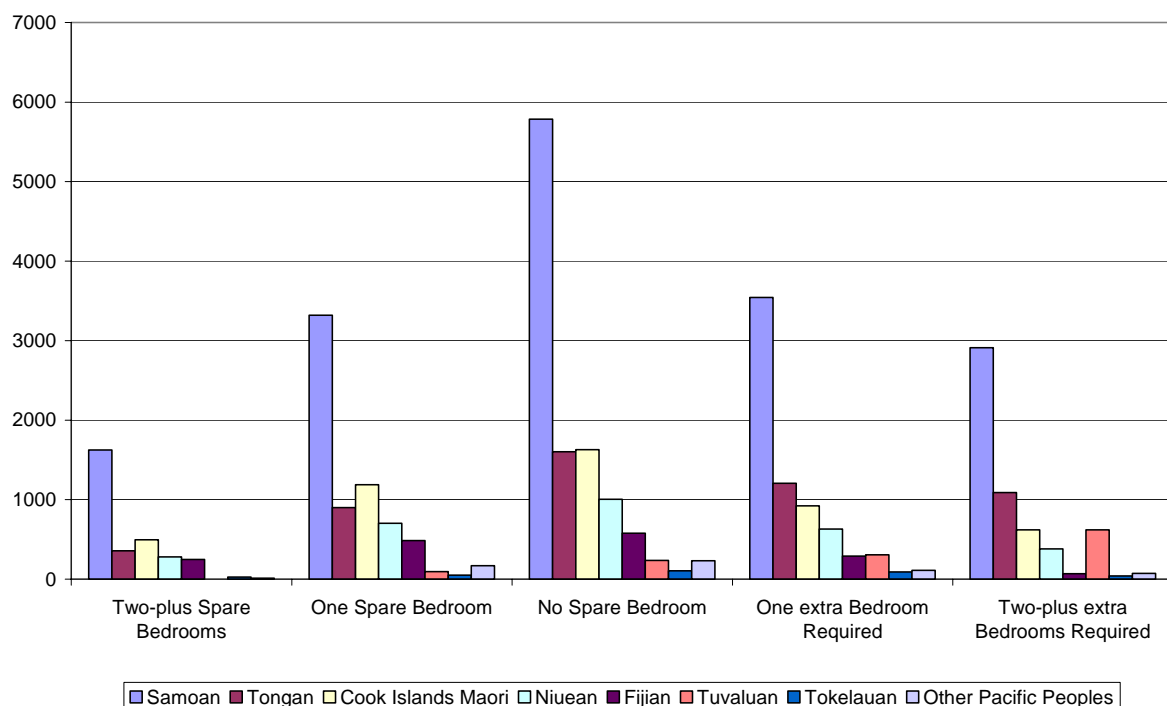


## Housing

### Household crowding

Figure 26 shows that 22% (6753) and 19% (5631) of Pacific people require one extra bedroom or at least two extra bedrooms for the occupants of their homes. This compares to 6% and 3% respectively for the total Waitemata population.

**Figure 26 Waitemata Pacific with a spare or extra bedrooms required by ethnic group (total response), Census 2006**

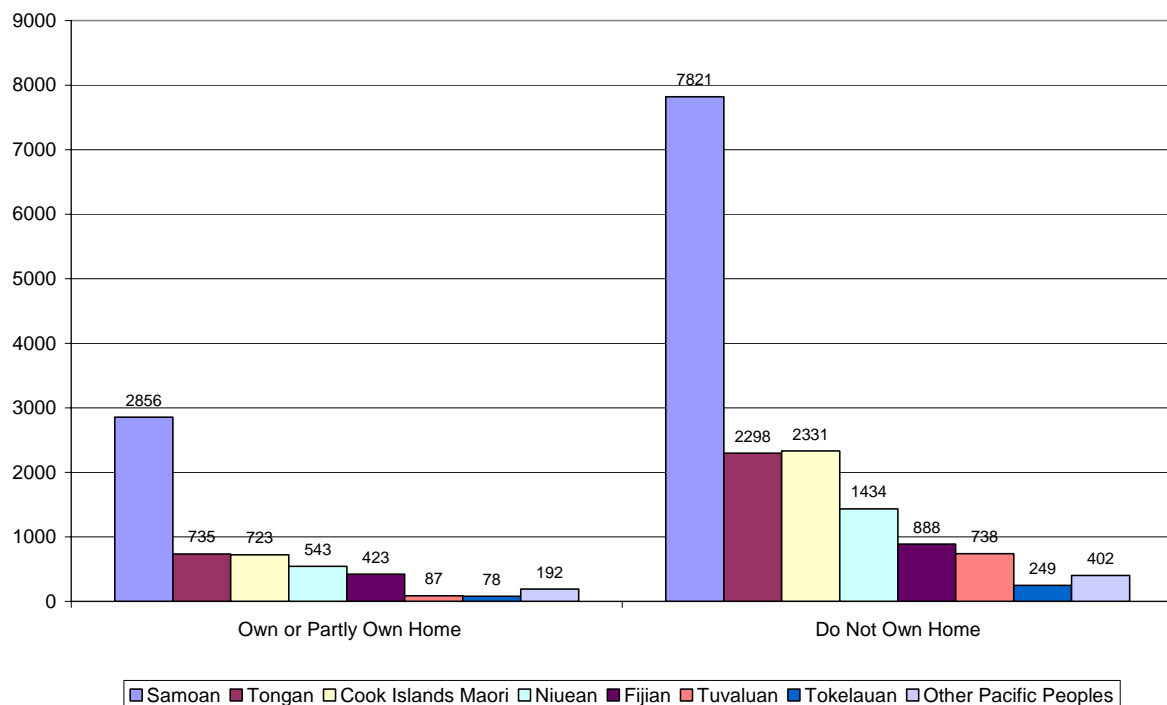


### Home ownership

Figure 27 shows that only 23% (5364) of Pacific people own or partly own their own homes compared to 48% (189426) of the total Waitemata population. Of those who own or partly own their own homes 51% are Samoan, 13% Tongan, 13% Cook Islanders Maori, 10% Niuean, 8% Fijian, 2% Tuvaluan, 2% Tokelauan and 3% Other Pacific.



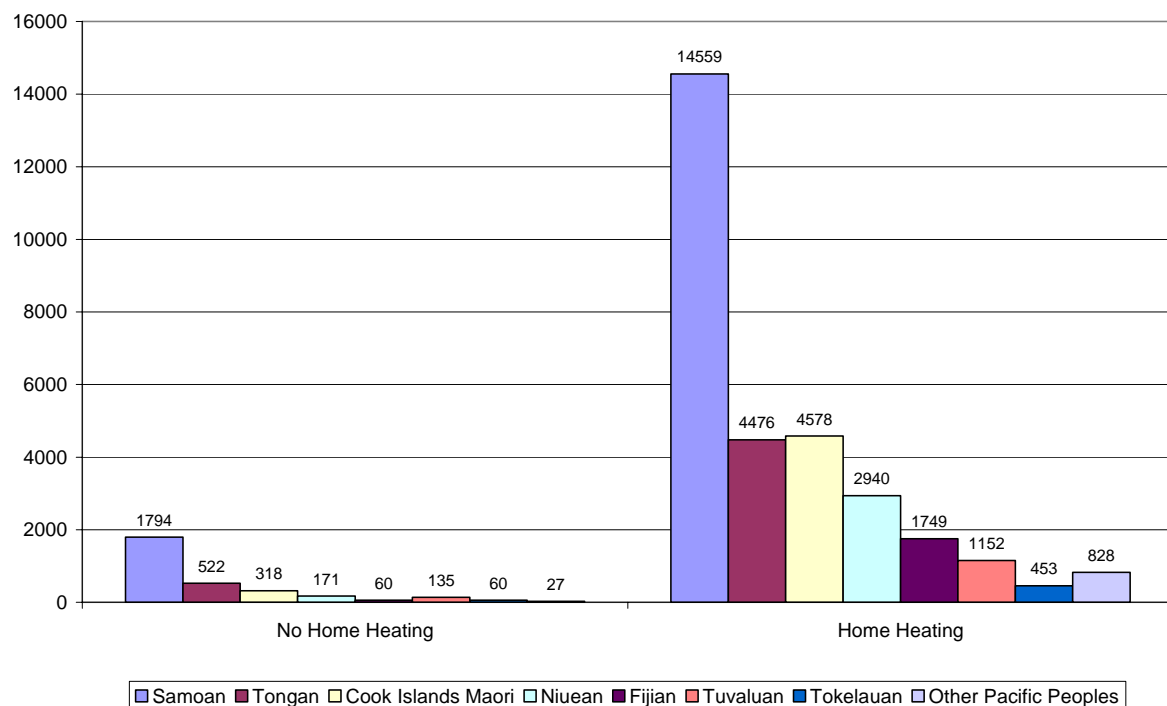
**Figure 27 Waitemata Pacific home ownership (for those aged 15+) by ethnic group (total response), Census 2006**



### Home heating

Figure 28 shows home heating by ethnic group. Close to 10% (2913) of Pacific people do not use home heating compared to 3% (14406) of the total Waitemata population. Of the Pacific people who do not use home heating 62% are Samoan.

**Figure 28 Waitemata Pacific use of home heating by ethnic group (total response), Census 2006**

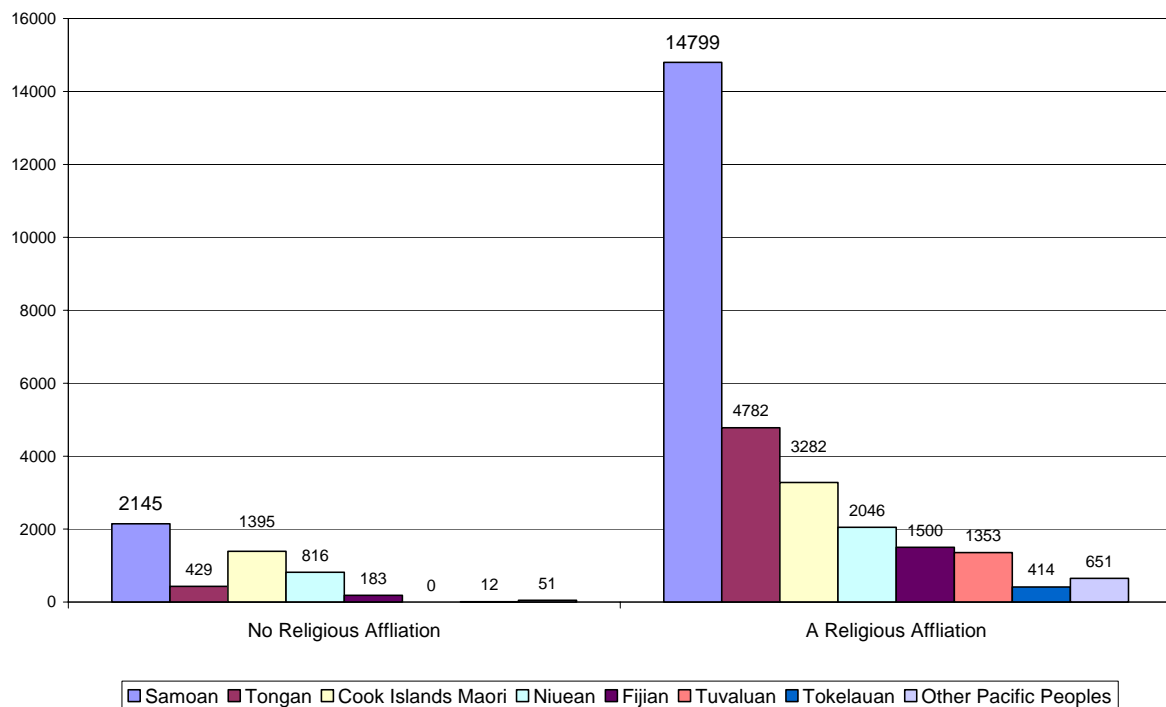


## Spiritual

### Religion

Figure 29 shows that 77% of Pacific people report having a religious affiliation compared to 55% of the total Waitemata population. Of the 5000 that do not 43% are Samoan, 28% are Cook Islands Maori, 16% Niuean, 9% Tongan and 4% Fijian.

**Figure 29 Waitemata Pacific peoples religious affiliations by ethnic group (total response), Census 2006**



## Mental

### Mental Health Prevalence

#### Chronic mental health condition

Table 14 shows that around 8% of Pacific adults in Waitemata reported a chronic mental health condition; this rate was similar to both the national Pacific population and the total Waitemata population rates, adjusted for age.

**Table 14 Age-standardised prevalence (percent, and 95% confidence intervals) of any self-reported chronic mental health condition, adults 15+ years, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	8.3 (5.2 - 12.4)	13.8 (11.2 - 16.6)	9.4 (7.1–12.3)
Male	6.9 (3.6 - 11.6)	9.9 (7.5 - 12.8)	7.8 (5.1–11.3)
Total	7.6 (4.8 - 11.3)	11.9 (9.4 - 14.1)	8.7 (6.7–11.0)

Source: Health & Disability Intelligence Unit, Ministry of Health

#### Probability of having an anxiety or depressive disorder

Table 15 shows that the prevalence of having a high or very high probability of having an anxiety or depressive disorder was around 10% for the Pacific Waitemata population. This rate did not differ significantly from the national Pacific prevalence when adjusted for age. Pacific people in Waitemata had a significantly higher rate than the total Waitemata population when adjusted for age.

**Table 15 Age standardised prevalence (percent, and 95% confidence intervals) of having high or very high probability of having an anxiety or depressive disorder, adults 15+ years, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	10.4 (7.1 - 14.5)	5.4 (3.8 - 7.4)	14.7 (11.5–18.3)
Male	8.7 (5.0 - 13.9)	4.1 (2.6 - 6.1)	12.3 (8.6–16.8)
Total	9.6 (6.8 - 13.0)	4.8 (3.3 - 6.3)	13.5 (11.0–16.4)

Source: Health & Disability Intelligence Unit, Ministry of Health

## Prevalence of mental disorders

The 12-month and lifetime prevalence rates of four disorder groups for Pacific peoples and the overall population are given in Table 16. Forty-six-and –a-half percent of Pacific people had experienced a mental disorder at some stage during their lifetime, compared with 39.5 percent of the overall New Zealand population. Over the preceding 12 months, 25 percent of Pacific peoples had experienced such a disorder, compared with 20.7 percent of the total New Zealand population.

**Table 16 Prevalence of mental disorders**

	Lifetime prevalence (%)		12-month prevalence (%)	
	Pacific	Overall NZ	Pacific	Overall NZ
<b>Mental Health</b>				
<b>Any disorder</b>	46.5	39.5	25.0	20.7
<b>Anxiety</b>	27.7	24.9	16.2	14.8
<b>Mood</b>	19.0	20.2	8.6	7.9
<b>Substance use</b>	17.7	12.3	1.5	0.5
<b>Eating</b>	4.4	1.7	5.3	3.5

Source: Oakley Browne et al. 2006

## Suicide deaths

Table 17 shows that the total and male Waitemata Pacific suicide rates were similar to both the national Pacific and total Waitemata total rates, adjusted for age for both total and male.

**Table 17 Suicide, 5+ years, age-standardised rates per 100,000 (and 95% confidence intervals), 2003-05**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	*	4.6 (3.2 - 6.5)	3.8 (2.0–6.7)
Male	12.8 (4.1 - 29.8)	17.1 (14.1 - 20.5)	15.5 (11.3–20.8)
Total	8.3 (3.3 - 17.2)	10.6 (8.9 - 12.4)	9.5 (7.2–12.3)

Source: Health & Disability Intelligence Unit, Ministry of Health \* Rates not presented for groups with small numbers.

## Self-harm hospitalisations (5+ years)

Table 18 shows that the intentional self-harm hospitalisation rate for Waitemata Pacific did not differ significantly from the national Pacific rate. The total Pacific rate of 52 per 100,000 was less than total Waitemata rate of 100 per 100,000. Waitemata Pacific females had a rate almost a third of Waitemata females while the Pacific male rate was similar to the Waitemata male rate.

**Table 18 Self-harm hospitalisation, 5+ years, age-standardised rates per 100,000 (and 95% confidence intervals), 2005-07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	44.4 (27.1–68.5)	129.4 (120.9–138.3)	63.3 (54.9–72.5)
Male	60.1 (38.5–89.4)	69.2 (62.8–76.1)	52.7 (44.9–61.5)
Total	51.7 (37.6–69.4)	99.6 (94.2–105.1)	58.1 (52.3–64.4)

Source: Health & Disability Intelligence Unit, Ministry of Health

## Physical

### Overall physical health

#### Self reported health

Table 19 shows just over 50 percent of Pacific adults in Waitemata reported that their general health status was excellent or very good which was similar to the national Pacific rate. The prevalence rates for Waitemata Pacific total and for females were significantly lower than the corresponding rates for total Waitemata population, adjusted for age.

**Table 19 Age-standardised prevalence (percent, and 95% confidence intervals) of self-reported excellent or very good health, adults 15+ years, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	52.1 (46.0 - 58.2)	64.0 (59.9 - 68.0)	51.1 (46.1–56.0)
Male	54.2 (48.0 - 60.3)	60.7 (56.5 - 64.9)	53.1 (48.1–58.1)
Total	53.1 (47.7 - 58.4)	62.4 (58.8 - 66.1)	52.1 (48.0–56.1)

Source: Health & Disability Intelligence Unit, Ministry of Health

#### Life expectancy

Table 20 shows life expectancy at birth. The life expectancy of Waitemata Pacific males and females was similar to national Pacific levels. Waitemata Pacific males and females have the lowest life expectancy of all ethnic groups within the Waitemata district.

**Table 20 Life expectancy at birth (years) in Waitemata and New Zealand, by gender and ethnicity, 2002-2005 usually residents, prioritised**

Ethnicity	Waitemata		New Zealand	
	Female	Male	Female	Male
Maori	80.7	73.5	74.8	69.9
Pacific	77.0	71.0	76.9	72.1
Asian	92.5	89.8	87.8	84.5
European/other	84.1	80.3	82.9	76.8

Source: Health Information for Action Team, WDHB

## Health expectancy of Pacific peoples

Table 21 shows how long, on average, Pacific people can expect to live with disability that requires assistance. Pacific males can expect to spend a smaller proportion of their lives living dependently than the New Zealand and Pacific female populations. However, Pacific males' Independent Life Expectancy (ILE) at birth is also lower than that of the New Zealand and Pacific female populations.

**Table 21 Health expectancy of New Zealand Pacific people and the total New Zealand population Pacific**

	New Zealand Pacific		New Zealand	
	Female	Male	Female	Male
<b>Life expectancy at birth (years)</b>	76.7	71.5	81.1	76.3
<b>Years expected to be lived with disability requiring Assistance (DRA)</b>	13.6	9.7	13.5	11.8
<b>Ratio of years expected to be lived with DRA to life expectancy (%)</b>	17.7	13.6	16.6	15.5
<b>Independent life Expectancy (years)</b>	63.1	61.8	67.6	64.5

Source: Ministry of Health, 2008c.

## Prevalence of disabilities

In 2006 there were an estimated 18,700 Pacific adults and 6100 Pacific children with disability living in New Zealand. The proportions of men and women among disabled Pacific adults were similar to those for disabled adults from other ethnic groups: 46 percent male and 54 percent female for disabled Pacific adults, compared with 41 percent and 59 percent for European/Other and 44 percent and 56 percent for Maori. Twenty-five percent of Pacific people with a disability were children, compared with 10 percent of European/Other people with a disability.

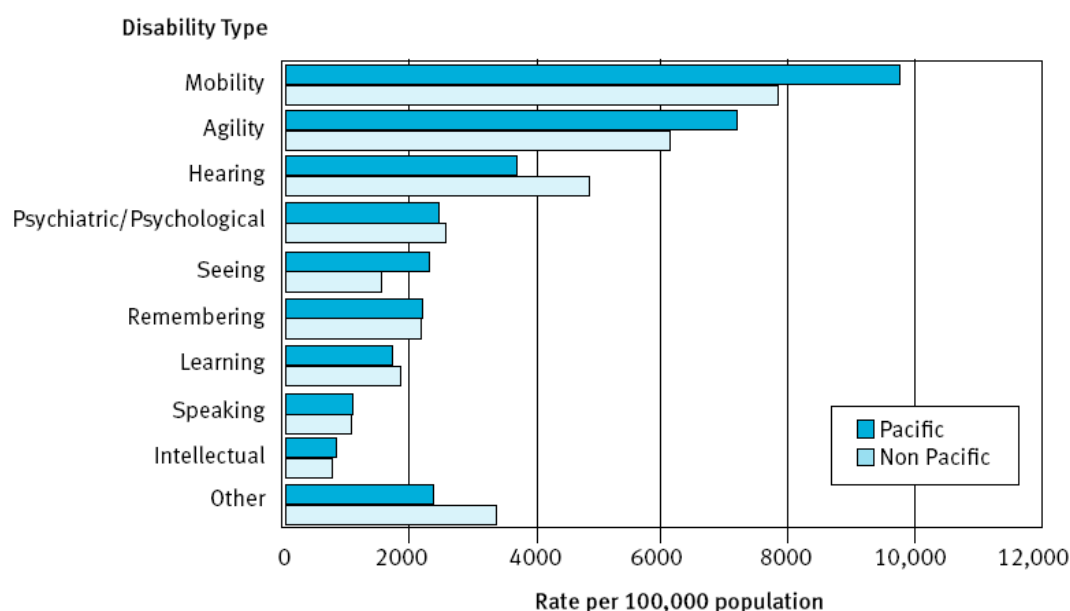
The percentage of Pacific adults with disability in the 65 years and over age group (16 percent) was noticeably lower than the percentage of European/Other adults in the equivalent group (38 percent). Conversely, the percentage of Pacific adults with disability who were aged 15–44 years was noticeably higher than non-Pacific adults in the same age group (33 percent compared with 19 percent).

## Disability type

Figure 30 shows types of disability for New Zealand Pacific and non-Pacific adults. Physical disabilities (mobility and agility) were the most common type of disability reported by Pacific adults, followed by other (e.g. speaking, learning, remembering) sensory (hearing and vision) disabilities. Sixty-four percent of disabled Pacific adults had a physical disability, 41 percent had other disability

and 35 percent had a sensory disability. This was slightly different to the pattern in the total population, where mobility (66 percent) was also the most common disability type; however it was followed by sensory (42 percent) and then other (39 percent) disabilities.

**Figure 30 Age-standardised rates of different disability types for Pacific and non-Pacific adults living in households, 2001**



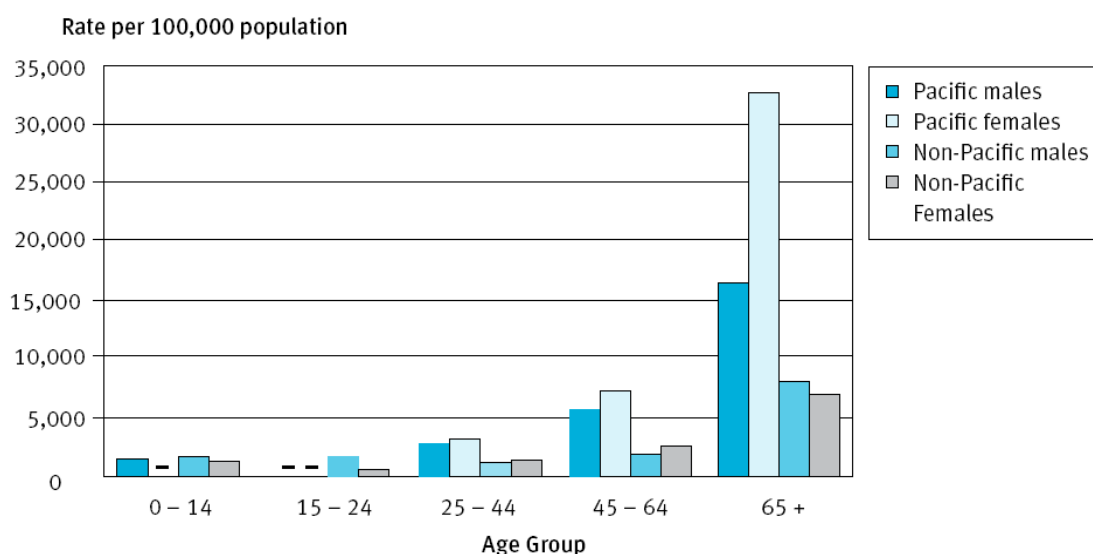
Source: Ministry of Health, 2008c.

## Severity of disability

Figure 31 shows rates of severity of disability for New Zealand Pacific and non-Pacific adults. Forty-four percent of disabled Pacific people reported having mild disability, which was similar to the proportion of non-Pacific people (43 percent). A smaller proportion had moderate disability than non-Pacific people (32 and 45 percent, respectively), but a greater proportion had severe disability compared with non-Pacific people (24 and 12 percent, respectively). Pacific adults aged 65 and over were almost three times more likely than non-Pacific adults in the same age group to have severe disability (25,900 and 7700 per 100,000 respectively). Pacific women aged 65 and over were twice as likely as Pacific men aged 65 and over to have severe disability (32,700 and 16,700 per 100,000, respectively). Pacific women in this age group were also over four times more likely than non-Pacific women to have severe disability (32,700 and 7200 per 100,000). In the 2006 survey, 24 percent of Pacific adults with disability had high support needs, which was higher than for all disabled adults (16 percent).



**Figure 31 Rates of severe disability among Pacific and non-Pacific people (adults and children) living in households, by age and sex, 2001**



Source: Statistics New Zealand 2001

Note a dash (–) in a column indicates that the percentages were too small to report.

## Mortality

### All-cause mortality

Table 22 shows Waitemata Pacific people had higher rates than the total population in the Waitemata district, adjusted for age. Pacific Males had a higher all-cause mortality rate than Pacific females in Waitemata

**Table 22 All-cause mortality, 0-74 years, age-standardised rates per 100,000, 2003-05**

Gender	Waitemata Pacific	Waitemata Total
Female	571.7	323.2
Male	973.2	457.3
Total	738.8	383.1

Source: Health Information for Action Team, WDHB

### Avoidable mortality

Table 23 show that the avoidable mortality rate for Waitemata Pacific was similar to the national Pacific rate, adjusted for age. Waitemata Pacific males had a significantly higher avoidable mortality rate than Waitemata Pacific females, adjusted for age. Waitemata Pacific peoples both males and females had significantly higher rates than total Waitemata males and females, adjusted for age.

**Table 23 Avoidable mortality, 0-74 years, age-standardised rates per 100,000 (and 95% confidence intervals), 2003-05**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	220.1 (172.9 - 276.4)	113.8 (106.6 - 121.4)	231.6 (213.4–251.0)
Male	376.8 (308.5 - 455.7)	170.2 (161.0 - 179.8)	399.5 (373.9–426.3)
Total	289.7 (248.9 - 335.3)	141.0 (135.2 - 147.1)	310.0 (294.6–326.1)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Leading causes of avoidable mortality

The five leading causes of avoidable mortality for Pacific people in Waitemata are shown in Table 24. They were Ischaemic heart disease, Diabetes, Stroke and lung and breast cancer. The total Waitemata population had three of the same top five leading causes of avoidable mortality as the Waitemata Pacific population. These were Ischaemic heart disease, lung cancer and stroke.

**Table 24 Leading causes of avoidable mortality, by ethnic group, 0-74 years, 2003-05**

Waitemata		Waitemata	
Pacific	Rank	Total	Rank
Ischaemic heart disease	1	Ischaemic heart disease	1
Diabetes	2	Lung Cancer	2
Stroke	3	Colorectal Cancer	3
Lung Cancer	4	Suicide and self inflicted injuries	4
Breast Cancer	5	Stroke	5

Source: Health & Disability Intelligence Unit, Ministry of Health

## Hospitalisation

### Overall hospitalisation

Table 25 shows that Waitemata Pacific people had higher rates than the total Waitemata population.

**Table 25 Total hospitalisations, all years, age-standardised rates per 1000, 2005-07**

Gender	Waitemata Pacific	Waitemata Total
Female	265	197
Male	208	165
Total	238	181

Source: Health Information for Action Team, WDHB

### Avoidable hospitalisation

Table 26 shows that the avoidable hospitalisation rate for Waitemata Pacific was significantly higher than both the national Pacific and the total Waitemata rates for both males and females.

Waitemata Pacific males had a significantly higher rate of avoidable hospitalisations than Waitemata Pacific females; this pattern was also present in both the national Pacific rates and total Waitemata rates.

**Table 26 Avoidable hospitalisations, 0-74 years, age-standardised rates per 100,000 (and 95% confidence intervals), 2005-07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	5995.4 (5769.7–6227.6)	3210.1 (3168.8–3251.8)	5487.4 (5408.1–5567.6)
Male	6748.9 (6502.4–7002.3)	3684.5 (3639.7–3729.7)	6077.6 (5992.4–6163.7)
Total	6358.4 (6191.2–6528.8)	3442.0 (3411.6–3472.6)	5770.2 (5712.1–5828.8)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Leading causes of avoidable hospitalisations

Table 27 shows the top five leading causes of avoidable hospitalisations. Three of the top five causes were the same for Waitemata Pacific people and the total Waitemata population.

**Table 27 Leading causes of avoidable hospitalisations, by ethnic group, 0-74 years, 2005-07**

Waitemata		Waitemata	
Pacific	Rank	Total	Rank
Respiratory infections	1	Angina	1
Angina	2	Respiratory infections	2
Cellulitis	3	Cellulitis	3
Asthma	4	Road traffic injury	4
COPD	5	ENT infections	5

Source: Health & Disability Intelligence Unit, Ministry of Health Note: COPD = Chronic obstructive pulmonary disease, ENT Infections = Ear, nose and throat infections

## Physical health across the life course

### Maternity and Birth

#### Types of birth

Table 28 shows that among Pacific Mothers in the Waitemata district, 75% of (publicly funded) birth events were normal vaginal deliveries, which was similar to the proportion of normal deliveries for Pacific people in New Zealand (77%). Pacific mothers in Waitemata and New Zealand had a greater proportion of normal vaginal deliveries than all (total) mothers.

**Table 28 Delivery events, publicly funded, by type of birth and ethnic group, 2007**

	Birth type	Pacific		Total	
		No.	%	No.	%
<b>Waitemata</b>	<b>Normal birth</b>	635	75%	4,259	62%
	<b>Caesarean section</b>	170	20%	1,892	28%
	<b>Assisted birth</b>	41	5%	718	10%
	<b>Total</b>	846	100%	6,869	100%
<b>New Zealand</b>	<b>Normal birth</b>	4,845	77%	38,556	65%
	<b>Caesarean section</b>	1,116	18%	14,753	25%
	<b>Assisted birth</b>	333	5%	5,719	10%
	<b>Total</b>	6,294	100%	59,028	100%

Source: Health & Disability Intelligence Unit, Ministry of Health

**Notes** This analysis presents information about (publicly funded) delivery events occurring in 2007. Deliveries are identified by the presence of the mother's outcome of delivery code (ICD10 Z37) in any of the diagnosis fields.

The following ICD-10 procedure codes are used to group into type of delivery:

Normal birth                9046700

Assisted birth

Forceps                9046800–9046805

Vacuum                9046900–9046901

Breech                9047000–9047004 (includes spontaneous breech)

Caesarean                1652000–1652003

If more than one of these procedure codes was reported for each event this analysis groups deliveries with the following priority: Caesarean > assisted (includes spontaneous breech) > normal.

### Pregnancy complications

Table 29 shows that for Pacific mothers living in the Waitemata district, the rate of admission to hospital for pregnancy complications was lower than the Pacific New Zealand rate. Within Waitemata, Pacific mothers had a higher rate of admissions than the total population.

**Table 29 Pregnancy complications, number of admissions and rate per 1000 births, for 2004–06**

		Pacific	Total
Waitemata	Admissions (2004–06)	903	5,823
	Rate per 1000 births	378.0	271.4
New Zealand	Admissions (2004–06)	7,409	53,676
	Rate per 1000 births	411.7	302.6

Source: Health & Disability Intelligence Unit, Ministry of Health; **Definitions**

Pregnancy complications: Defined using the following AR-DRG (5.0) codes: O64A, O64B, O66A, O66B.

Rate per 1000 births: A crude rate where the denominator was the number of live and still births occurring in the years 2004–06 and the numerator was the total number of admissions in the year 2004–06. Note that not all births for this period will have been registered at the time of data extraction, but that the data presented was for less recent periods to minimise the effect of late registration.

### Perinatal mortality

Perinatal mortality includes foetal deaths of 20 weeks or more gestation or 400 grams birth weight, plus infant deaths 7 days after birth. Table 30 shows that the Pacific rate of perinatal mortality in Waitemata was 9.6 per 1000 total births. This was similar to the Pacific national rate and the Waitemata total rate.

**Table 30 Perinatal mortality, rate per 1000 total births (and 95% confidence intervals), 2003–05**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	9.7 (5.0–16.9)	8.7 (6.9–10.7)	12.4 (10.2–14.9)
Male	9.5 (5.1–16.3)	9.1 (7.4–11.1)	11.8 (9.7–14.2)
Total	9.6 (6.2–14.2)	8.9 (7.7–10.3)	12.1 (10.6–13.8)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Low birth weight prevalence

Low birth weight is defined as a birth weight less than 2,500g. Birth weight is determined by duration of gestation and by foetal growth so LBW may be due to preterm birth or a problem with growth. LBW predicts neonatal morbidity and mortality. Table 31 shows that the Pacific rate of low birth weight in Waitemata was around 40 per 1000 total births. Waitemata Pacific babies had a significantly lower rate of low birth weight than total Waitemata babies.

**Table 31 Low birth weight, rate per 1000 live births (and 95% confidence intervals), 2007**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	42.4 (31.7–55.6)	63.8 (59.0–68.9)	49.7 (45.2–54.6)
Male	37.6 (28.0–49.5)	53.3 (49.0–57.8)	43.2 (39.1–47.6)
Total	39.9 (32.6–48.4)	58.4 (55.1–61.7)	46.3 (43.3–49.6)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Infant mortality (birth–1 year)

Table 32 shows that the Pacific rate of infant mortality (3.1 per 1000 live births) in Waitemata was lower than the Pacific national rate (borderline statistical significance). Mortality of Waitemata Pacific infants was similar to that of total Waitemata infants.

**Table 32 Infant mortality, rate per 1000 live births (and 95% confidence intervals), 2007**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	*	3.9 (2.7–5.3)	7.3 (5.6–9.3)
Male	*	4.3 (3.1–5.7)	7.2 (5.6–9.1)
Total	3.1 (1.3–6.1)	4.1 (3.3–5.0)	7.2 (6.1–8.6)

Source: Health & Disability Intelligence Unit, Ministry of Health; \*Rates not presented for groups with small numbers.

## Child physical health (0–14 years)

### Leading causes of hospitalisations for children 0–4 years

Table 33 shows that Pacific children in Waitemata had three of the same leading causes of hospitalisations for children 0–4 years of age as Waitemata as a whole. These common causes were respiratory infections, disorders related to length of gestation and fetal growth and health supervision and care of other healthy infant and child. Other leading causes of hospitalisations for Pacific children aged 0–4 years were Asthma and Cellulitis.

**Table 33 Leading causes of hospitalisations, by ethnic group, 0–4 years, 2005–07**

Waitemata		Waitemata	
Pacific	Rank	Total	Rank
Respiratory infections	1	Respiratory infections	1
Asthma	2	Disorders related to length of gestation and fetal growth	2
Disorders related to length of gestation and fetal growth	3	Health supervision and care of other healthy infant and child	3
Health supervision and care of other healthy infant and child	4	ENT infections	4
Cellulitis	5	Gastroenteritis	5

Source: Health & Disability Intelligence Unit, Ministry of Health; Note: ENT infections = ear, nose and throat infections. Health supervision and care of other healthy infant and child = (ICD10 code Z762) Medical or nursing care or supervision of healthy infant under circumstances such as: adverse socioeconomic conditions at home, awaiting foster or adoptive placement, maternal illness, number of children at home preventing or interfering with normal care.

### Leading causes of hospitalisations for children 5–14 years

Table 34 shows that three of the five leading causes of hospitalisations for Pacific children aged 5–14 years in Waitemata were the same as in Waitemata as a whole. These were dental conditions, falls and ear, nose and throat infections. The other leading causes for Waitemata Pacific children aged 5–14 years were Asthma and Cellulitis.

**Table 34 Leading causes of hospitalisations, by ethnic group, 5–14 years, 2005–07**

Waitemata		Waitemata	
Pacific	Rank	Total	Rank
Falls	1	Falls	1
ENT infections	2	Dental conditions	2
Cellulitis	3	ENT infections	3
Dental conditions	4	Chronic diseases of tonsils and adenoids	4
Asthma	5	Exposure to inanimate mechanical forces	5

Source: Health & Disability Intelligence Unit, Ministry of Health; Note: ENT infections = ear, nose and throat infections.



## Oral Health

### Five-year old children

Table 35 shows the proportion of five-year olds examined, percentage of caries-free teeth and average number of decayed, missing or filled teeth. The proportion of Pacific children examined (45.1%) and with caries-free teeth was less than the proportion of total Waitemata population examined (55.9%) and with caries-free teeth (63.8%). The average number of decayed, missing or filled teeth was around three for Pacific five-year olds which was more than twice the average for all Waitemata five-year olds.

**Table 35 Number of five years olds examined in Waitemata, 2006**

<b>Ethnicity</b>	<b>Number examined</b>	<b>Proportion of population examined</b>	<b>Caries-free teeth</b>	<b>Average Number DMFT</b>
<b>Pacific</b>	374	45.1%	37.4%	2.96
<b>Total</b>	3833	55.9%	63.8%	1.41

Note: DMFT = decayed, missing or filled teeth. Source: Auckland Regional Dental Service- Oral Health Report (Update) 2006. Authors: Dr. Sathananthan Kanagaratnam Dr. John Dalton Report prepared November 2007

Table 36 shows the percentages of decayed, missing or filled teeth for five-year olds in the Waitemata district. Pacific children have higher rates of decayed teeth (84.9%), similar rates of missing teeth (3.5%) and lower rate of filled teeth (11.6%) than all Waitemata five-year olds as a whole.

**Table 36 Number of five year olds with decayed, missing or filled teeth in Waitemata, 2006**

<b>Ethnicity</b>	<b>Decayed Teeth</b>	<b>Missing Teeth</b>	<b>Filled Teeth</b>
<b>Pacific</b>	84.9%	3.5%	11.6%
<b>Total</b>	76.5%	3.4%	20.1%

Source: Auckland Regional Dental Service- Oral Health Report (Update) 2006. Authors: Dr. Sathananthan Kanagaratnam Dr. John Dalton Report prepared November 2007

### School Year 8 (11-12 year old) children

Table 37 shows the proportion of school Year 8's examined, percentage of caries-free teeth and average number of decayed, missing or filled teeth. The proportion of Pacific children examined (61.2%) and with Caries-free teeth (41.5%) was less than the proportion of total examined (73.8%) and with Caries-free teeth (53.5%). The average number of decayed, missing or filled teeth was around two for Pacific school Year 8's which was more than one-and-a-half times the average for all Waitemata school Year 8's.

**Table 37 Caries-free teeth of school Year 8 children in Waitemata, 2006**

<b>Ethnicity</b>	<b>Number examined</b>	<b>Proportion of school roll examined</b>	<b>Caries-free teeth</b>	<b>Average Number DMFT</b>
<b>Pacific</b>	386	61.2%	41.5%	2.02
<b>Total</b>	5061	73.8%	53.5%	1.24

**Source:** Auckland Regional Dental Service- Oral Health Report (Update) 2006. Authors: Dr. Sathananthan Kanagaratnam Dr. John Dalton Report prepared November 2007

Table 38 shows the percentages of decayed, missing or filled teeth for school year 8's in the Waitemata district. Pacific children have higher rates of decayed teeth (48.3%), the same rates of missing teeth (0.6%) and lower rate of filled teeth (51.0%) than all Waitemata school year 8's as a whole.

**Table 38 Percentage of decayed, missing and filled teeth in school Year 8 children in Waitemata, 2006**

<b>Ethnicity</b>	<b>Decayed Teeth</b>	<b>Missing Teeth</b>	<b>Filled Teeth</b>
<b>Pacific</b>	48.3%	0.6%	51.0%
<b>Total</b>	37.2%	0.6%	62.2%

**Source:** Auckland Regional Dental Service- Oral Health Report (Update) 2006. Authors: Dr. Sathananthan Kanagaratnam Dr. John Dalton Report prepared November 2007

## **Diseases and conditions**

### **Childhood asthma hospitalisations**

Table 39 shows that the Waitemata Pacific child asthma hospitalisation rate was significantly higher than both the national Pacific child rate and total Waitemata rate. Males had a significantly higher rate than females.

**Table 39 Asthma hospitalisation, 0–14 years, age-standardised rates per 100,000 (and 95% confidence intervals), 2005–07**

<b>Gender</b>	<b>Waitemata Pacific</b>	<b>Waitemata Total</b>	<b>NZ Pacific</b>
<b>Female</b>	779.2 (645.5–932.4)	300.3 (273.2–329.4)	712.7 (664.4–763.7)
<b>Male</b>	1225.8 (1061.8–1407.9)	468.7 (435.2–504.0)	982.9 (927.1–1041.2)
<b>Total</b>	1011.4 (903.4–1128.7)	386.9 (365.1–409.7)	851.0 (813.7–889.4)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Child hospitalisations due to poisoning

Table 40 shows that the Pacific Waitemata child hospitalisation rate due to poisoning was similar to both the national Pacific rate and the total Waitemata rate.

**Table 40 Poisoning hospitalisation, 0–14 years, age-standardised rates per 100,000 (and 95% confidence intervals), 2005–07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	59.2 (27.1–112.3)	52.0 (41.1–65.0)	42.4 (31.3–56.2)
Male	55.2 (25.3–104.8)	48.5 (38.2–60.7)	85.4 (69.6–103.8)
Total	57.2 (33.9–90.4)	50.2 (42.6–58.8)	64.4 (54.4–75.6)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Child hospitalisations due to falls

Table 41 shows that the Pacific rate of child hospitalisations due to falls in Waitemata was significantly higher than the total Waitemata rate, and higher (but not statistically) than the national Pacific rate.

**Table 41 Hospitalisation due to falls, 0–14 years, age-standardised rate per 100,000 (and 95% confidence intervals), 2005–07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	711.6 (584.3–858.4)	580.6 (543.2–619.9)	605.2 (560.9–651.9)
Male	948.0 (803.8–1110.7)	791.5 (748.9–835.8)	847.7 (796.1–901.6)
Total	832.3 (734.5–939.4)	688.3 (659.8–717.8)	728.9 (694.7–764.4)

Source: Health & Disability Intelligence Unit, Ministry of Health

## Young People's Health (15-24)

### Youth smoking prevalence

Table 42 shows that current youth smoking rates in Waitemata Pacific were lower than in the national Pacific population; the difference was most marked among those aged 15-19 years. Waitemata Pacific youth smoking rates were higher than total Waitemata rates.

**Table 42 Current smoking prevalence (self-reported), 15-24 years, age-specific percent, 2006**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
<b>Female 15-19</b>	17.1	13.9	27.8
<b>Male 15-19</b>	17.2	13.6	45.8
<b>Female 20-24</b>	35.0	22.8	38.5
<b>Male 20-24</b>	34.6	28.0	39.0

Source: Ministry of Health WDHB Report based on Census 2006.

### Youth hospitalisations due to unintentional injury

Table 43 shows that Pacific youth unintentional injury hospitalisation rate in Waitemata was similar to the national Pacific rate but significantly higher than that total Waitemata rate. The rate of youth hospitalisation due to unintentional injury for Pacific males in Waitemata was almost four times the rate for Pacific females.

**Table 43 Unintentional injury hospitalisation, 15–24 years, age-standardised rate per 100,000 (and 95% confidence intervals), 2005–07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
<b>Female</b>	923.7 (727.8–1156.1)	917.2 (858.9–978.5)	934.2 (860.1–1013.0)
<b>Male</b>	3951.7 (3525.3–4415.4)	2573.1 (2476.4–2672.5)	3442.5 (3296.9–3592.8)
<b>Total</b>	2405.3 (2171.9–2656.9)	1759.4 (1702.3–1817.9)	2172.6 (2091.3–2256.4)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Teenage mothers (15–19 years) – birth rates

Table 44 shows that Pacific teenagers aged 15 to 19 years living in the Waitemata had a slightly lower rate of births (40.5 per 1000) compared to the national Pacific rate (49.3 per 1000) but almost twice the rate of the total Waitemata mothers aged 15 to 19 years (22.1 per 1000).

**Table 44 Live and still births registered in 2007 for mothers aged 15–19 years, by ethnic group**

		<b>Pacific</b>	<b>Total</b>
<b>Waitemata</b>	<b>Live and still births</b>	63	400
	<b>Female population</b>	1,557	18,102
	<b>Rate (per 1000)</b>	40.5	22.1
<b>New Zealand</b>	<b>Live and still births</b>	583	5,036
	<b>Female population</b>	11,832	149,461
	<b>Rate (per 1000)</b>	49.3	33.7

Source: Health & Disability Intelligence Unit, Ministry of Health

**Definitions:**

Live and still births: The number of live and still births registered during 2007 where the mother was aged 15–19 years at the date of birth.

Female population, 15–19 years: The number of people in the female population aged 15–19 years in 2007.

## Adult Health (aged 15+ or 25+)

### Prevalence of cardiovascular disease and diabetes

#### Ischaemic heart disease prevalence

Table 45 shows that in Waitemata 2.9 percent of Pacific females and 1.2 percent of Pacific males reported that they had Ischaemic heart disease, adjusted for age. These rates are similar to both the national Pacific prevalence and the total Waitemata prevalence of Ischaemic heart disease.

**Table 45 Age standardised prevalence (percent, and 95% confidence intervals) of self-reported ischaemic heart disease, adults 15+ years, 2006/07 NZHS**

<b>Gender</b>	<b>Waitemata Pacific</b>	<b>Waitemata Total</b>	<b>NZ Pacific</b>
<b>Female</b>	2.9 (1.2 - 6.0)	3.1 (1.9 - 4.9)	3.1 (1.6–5.4)
<b>Male</b>	1.2 (0.1 - 5.2)	4.5 (3.1 - 6.2)	1.3 (0.2–3.9)
<b>Total</b>	2.1 (0.8 - 4.6)	3.8 (2.5 - 5.1)	2.2 (1.2–3.7)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Cerebrovascular disease (stroke) prevalence

Table 46 shows that under-one percent of Pacific adults in Waitemata reported that they had experienced a stroke, adjusted for age. This rate was lower than the national Pacific rate (although not statistically significantly different) and comparable to the total Waitemata population rate.

**Table 46 Age standardised prevalence (percent, and 95% confidence intervals) of self-reported stroke, 15+ years, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	0.9 (0.1 - 4.1)	0.7 (0.3 - 1.6)	1.8 (0.6–3.9)
Male	0.8 (0.0 - 5.8)	0.8 (0.3 - 1.7)	1.4 (0.2–4.6)
Total	0.9 (0.1 - 3.4)	0.7 (0.3 - 1.4)	1.6 (0.6–3.4)

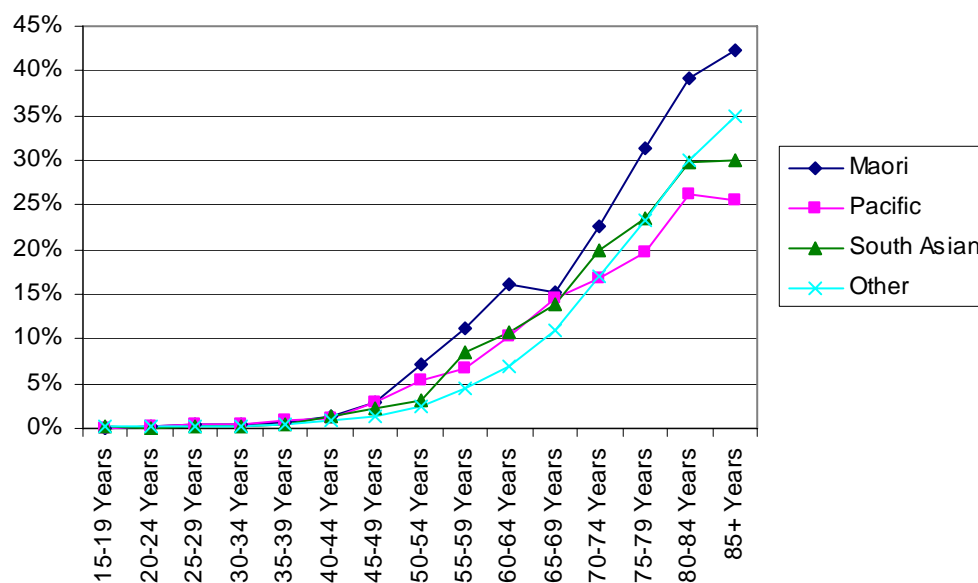
Source: Health & Disability Intelligence Unit, Ministry of Health

### Cardiovascular disease prevalence

Recently HDIU and the University of Auckland have estimated prevalence of cardiovascular disease directly from hospital records and pharmaceutical dispensing. Cardiovascular disease includes coronary heart disease, ischaemic stroke, peripheral vascular disease, and congestive heart failure. It is felt that this methodology gives the most accurate estimates we have to date of diagnosed cardiovascular disease.

Figure 32 shows that the prevalence of cardiovascular disease reaches 25-40% by age 80 years. The prevalence of cardiovascular disease was highest in Maori in all age groups and is higher in South Asians and Pacific than in Others in people between the ages of 45 and 74.

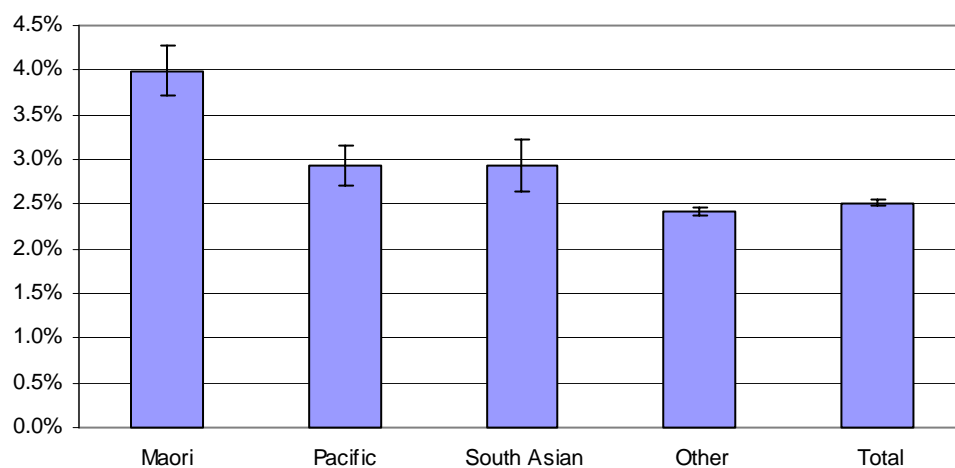
**Figure 32 Age specific prevalence of cardiovascular disease by ethnicity (prioritised), Waitemata, 2007,**



Source: HDIU and University of Auckland

Figure 33 shows that Maori have the highest prevalence of cardiovascular disease, followed by Pacific and South Asian.

**Figure 33 Age-standardised prevalence of cardiovascular disease (with 95% confidence intervals) by ethnicity (prioritised), Waitemata, 2007**



Source: HDIU and University of Auckland

### Diabetes prevalence

The prevalence of diabetes is not known with precision. Here we report on two estimates. The first is based upon the self-reported prevalence found in the New Zealand Health Survey. The second is calculated by counting all people who have had contact with hospital with a diagnosis of diabetes, had multiple blood tests to monitor diabetes, or anyone who has been prescribed diabetes medications.

Table 47 shows self-reported diabetes prevalence. The self-reported diabetes prevalence was 6.6 percent of Pacific adults in Waitemata, adjusted for age. Pacific people in Waitemata had a significantly higher rate compared to the total Waitemata population but similar when compared to the national Pacific population.

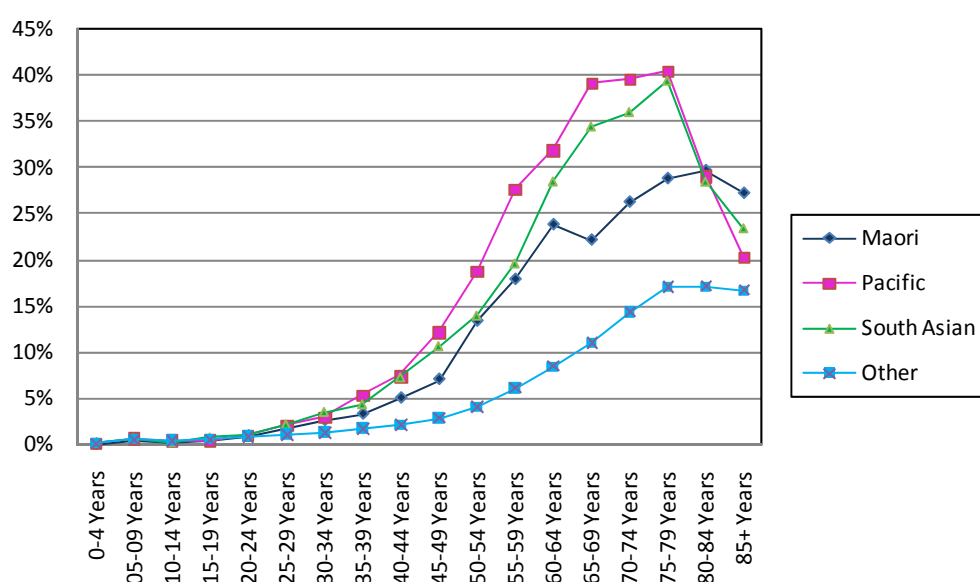
**Table 47 Age-standardised prevalence (percent, and 95% confidence intervals) of self-reported diabetes, adults 15+ years, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	6.0 (3.6 - 9.3)	3.0 (1.9 - 4.3)	7.5 (5.2–10.4)
Male	7.2 (4.1 - 11.6)	3.7 (2.6 - 5.1)	9.1 (6.0–13.1)
Total	6.6 (4.6 - 9.0)	3.3 (2.3 - 4.3)	8.3 (6.5–10.4)

Source: Health & Disability Intelligence Unit, Ministry of Health

There are estimated to be just over 20,000 people with diagnosed diabetes in Waitemata (1,370 Maori, 2,067 Pacific people, 1,266 South Asians, and 15,337 Others). Figure 34 shows that as much as 40% of some age groups of Pacific and South Asians have diabetes. Maori, Pacific, and South Asians frequently develop diabetes at much younger age than Others.

**Figure 34 Age-specific prevalence of diabetes by ethnicity (prioritised), Waitemata, 2007**

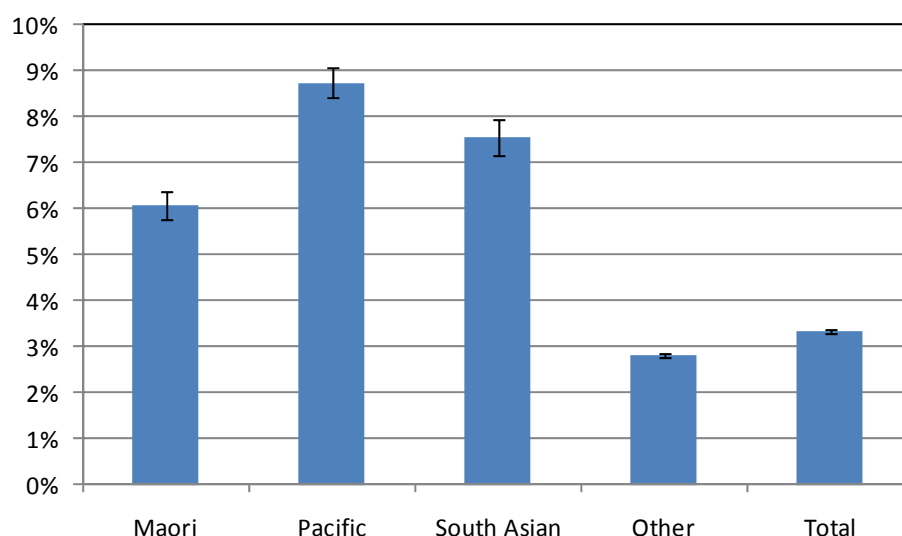


Source: HDIU and University of Auckland

Figure 35 shows that the prevalence of diagnosed diabetes in Maori, Pacific, and South Asians is over double, and in the case of Pacific, nearly treble, what it is in Others.



**Figure 35 Age-standardised prevalence of diabetes by ethnicity (prioritised), Waitemata, 2007**



Source: HDIU and University of Auckland

## Burden from cardiovascular disease and diabetes (mortality and hospitalisations)

### All cardiovascular disease mortality

Table 48 shows that the cardiovascular disease mortality rate for Pacific in Waitemata was significantly higher than the total Waitemata rate. Males experienced a significantly higher rate of mortality from cardiovascular disease than their female counterparts.

**Table 48 All cardiovascular disease mortality, all ages, age-standardised rates per 100,000 (and 95% confidence intervals), 2003-2005**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	214.2 (160.9 - 279.5)	106.2 (101.0 - 111.5)	192.9 (174.6–212.6)
Male	447.6 (359.9 - 550.2)	158.7 (150.5 - 167.1)	325.4 (299.2–353.3)
Total	311.0 (262.3 - 366.2)	130.6 (126.0 - 135.4)	253.7 (238.1–270.2)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Ischaemic heart disease mortality

Table 49 shows that the Pacific rate of ischaemic heart disease mortality in Waitemata was significantly higher than both the national Pacific and total Waitemata rates. The rate for Pacific males was significantly higher than that for Pacific females.

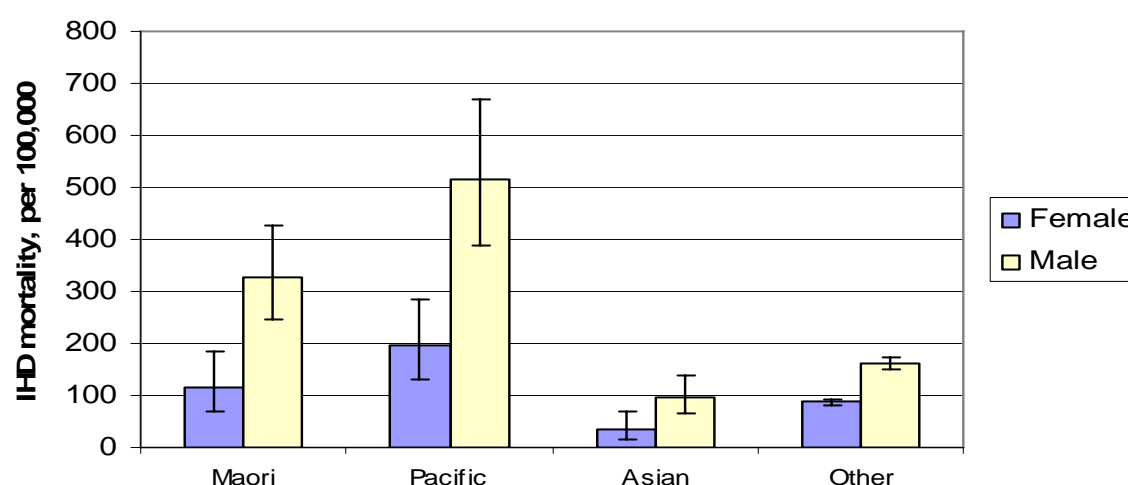
**Table 49 Ischaemic heart disease mortality, 25+ years , age-standardised rates per 100,000 (and 95% confidence intervals), 2003-05**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	197.2 (131.1 - 285.0)	89.9 (83.7 - 96.5)	153.1 (131.8–176.9)
Male	514.8 (388.8 - 668.5)	174.3 (163.1 - 186.2)	325.1 (290.8–362.4)
Total	324.5 (258.9 - 401.8)	128.0 (121.9 - 134.3)	229.3 (209.8–250.1)

Source: Health & Disability Intelligence Unit, Ministry of Health

Figure 36 shows that Pacific males have the highest rate of mortality from ischaemic heart disease than other ethnicities in the Waitemata district.

**Figure 36 Ischaemic heart disease mortality, 25+ years, age-standardised rates per 100,000 (and 95% confidence intervals) in Waitemata, by ethnicity (prioritised), 2003-05**



Source: Mortality, HDIU

### Cerebrovascular disease (stroke) mortality

Table 50 shows that the Pacific mortality rate for stroke in Waitemata was similar to the national Pacific rate but significantly higher than the total Waitemata population rate. Males and females had rates that were similar.

Table 50 Stroke mortality, 25+ years, age-standardised rates per 100,000 (and 95% confidence intervals), 2003-05

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	97.0 (53.0 - 162.8)	58.1 (53.2 - 63.4)	111.0 (92.7–131.8)
Male	132.3 (74.0 - 218.2)	51.5 (45.5 - 58.1)	113.7 (93.0–137.7)
Total	112.6 (75.4 - 161.8)	56.2 (52.3 - 60.3)	115.5 (101.2–131.2)

Source: Health & Disability Intelligence Unit, Ministry of Health

### All cardiovascular disease hospitalisations

Table 51 shows that the Pacific hospitalisation rate for cardiovascular disease in Waitemata was significantly higher than both the Pacific national rate and the total Waitemata population rate. Pacific males had significantly higher rates than females in Waitemata although the difference between males and females was less marked than for Waitemata overall and the national Pacific population.

Table 51 All cardiovascular disease hospitalisations, all ages, age-standardised rates per 100,000 (and 95% confidence intervals), 2005–2007

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	1773.9 (1634.3–1922.2)	899.2 (881.4–917.2)	1320.3 (1276.9–1364.7)
Male	2097.8 (1935.9–2269.6)	1510.8 (1485.1–1536.8)	1988.8 (1931.5–2047.4)
Total	1927.6 (1820.8–2039.1)	1185.8 (1170.6–1201.3)	1622.9 (1587.7–1658.7)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Ischaemic heart disease hospitalisations

Table 52 shows that the Pacific total rate of hospitalisations due to ischaemic heart disease in Waitemata was significantly higher than both the national Pacific rate and the total Waitemata rate. Male rates were higher than female rates.

**Table 52 Ischaemic heart disease hospitalisation, 25+ years , age-standardised rates per 100,000 (and 95% confidence intervals), 2005–2007**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
<b>Female</b>	1006.3 (866.2–1162.7)	533.5 (515.6–551.8)	614.3 (574.2–656.4)
<b>Male</b>	1477.3 (1303.2–1668.2)	1187.1 (1157.3–1217.6)	1240.1 (1180.8–1301.5)
<b>Total</b>	1230.6 (1118.8–1350.6)	841.8 (824.8–859.1)	909.4 (874.2–945.6)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Cerebrovascular disease (stroke) hospitalisations

Table 53 shows that the Pacific hospitalisation rate for stroke in Waitemata was significantly higher than both the national Pacific rate and the total Waitemata rate. Waitemata total and national Pacific (but not Waitemata Pacific) males had significantly higher rates than their female counterparts.

**Table 53 Stroke hospitalisation, 25+ years, age-standardised rates per 100,000 (and 95% confidence intervals), 2005–07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
<b>Female</b>	404.6 (318.3–507.2)	152.9 (143.6–162.6)	310.4 (282.0–340.8)
<b>Male</b>	622.1 (496.2–770.2)	219.4 (206.8–232.6)	392.3 (356.6–430.4)
<b>Total</b>	492.3 (418.8–575.1)	184.1 (176.4–192.1)	345.5 (323.1–369.1)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Diabetes hospitalisations

Table 54 shows that the Pacific diabetes hospitalisation rate in Waitemata was similar to the national Pacific rate but significantly higher (more than four times higher) than the total Waitemata rate. Pacific males had a similar rates compared to Pacific females, while total Waitemata females had lower rates than compared to their male counterparts.

**Table 54 Diabetes hospitalisations, 15+ years, age-standardised rates per 100,000 (and 95% confidence intervals), 2005-07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	760.8 (658.2–874.7)	176.3 (166.7–186.3)	781.9 (742.8–822.5)
Male	756.2 (642.8–883.7)	201.8 (190.9–213.2)	761.3 (719.9–804.4)
Total	762.2 (685.0–845.8)	187.5 (180.3–194.9)	771.0 (742.5–800.2)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Adult hospitalisations due to renal failure as long term complication of diabetes

Table 55 shows that the Pacific rate of hospitalisations of people with renal failure due to diabetes in Waitemata was similar to the national Pacific rate but was significantly higher (almost seven times higher) than the total Waitemata rate. Waitemata Pacific males had higher rates than Waitemata Pacific females, although the difference was not significant.

**Table 55 Diabetes complications - renal failure hospitalisations, 15+ years, age-standardised rate per 100,000 (and 95% confidence intervals), 2005-07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	85.2 (53.4–129.0)	16.2 (13.4–19.4)	91.8 (78.9–106.2)
Male	150.3 (100.7–215.9)	18.1 (15.0–21.7)	103.1 (88.6–119.3)
Total	114.1 (84.9–150.0)	17.1 (14.9–19.4)	97.0 (87.2–107.5)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Adult hospitalisations due to leg/foot/toe amputation as a complication of diabetes

Table 56 shows that the Pacific rate of hospitalisations due to leg / foot / toe amputation for people with diabetes in Waitemata was lower than the national Pacific rate but higher than the total Waitemata rate (none of these differences were statistically significant). Nationally Pacific males had a significantly higher rate than Pacific females.

**Table 56 Diabetes complications – leg/foot/toe amputation hospitalisation, 15+ years , age-standardised rates per 100,000 (and 95% confidence intervals), 2005-07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	17.4 (5.7–40.7)	3.9 (2.7–5.5)	21.2 (15.3–28.5)
Male	*	10.7 (8.4–13.5)	39.0 (29.9–50.0)
Total	16.4 (7.1–32.3)	6.9 (5.7–8.4)	28.7 (23.5–34.7)

Source: Health & Disability Intelligence Unit, Ministry of Health \* Rates not presented for groups with small numbers.

## Cancer Mortality

### All-cause cancer mortality

Table 57 shows that the Pacific cancer mortality rate in Waitemata was comparable to the national Pacific rate but significantly higher than the total Waitemata rate. Waitemata total and NZ Pacific males had significantly higher rates than females; this pattern was evident for the Waitemata Pacific population.

**Table 57 All cancer mortality, all ages, age-standardised rates per 100,000 (and 95% confidence intervals), 2003-05**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	141.1 (102.2 - 190.1)	109.1 (103.0 - 115.5)	143.7 (128.8–159.8)
Male	232.7 (173.2 - 305.9)	140.5 (132.7 - 148.6)	198.0 (178.2–219.4)
Total	177.8 (143.7 - 217.6)	122.1 (117.2 - 127.0)	166.3 (154.3–179.1)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Different cancer mortality

Table 58 shows rates of cancer mortality for lung cancer, breast cancer, cervical cancer and colorectal cancer. The overall Pacific rate for lung cancer mortality in Waitemata was similar to both the national Pacific rate and the total Waitemata rates.

The breast cancer Pacific mortality rate in Waitemata was similar to both the national Pacific rate and the total Waitemata rates. The cervical cancer mortality Pacific rate in Waitemata was significantly higher (five-times higher) than the total Waitemata rate but not significantly higher than the national Pacific rate.

The Pacific prostate cancer mortality rate for Waitemata was similar to both the national Pacific rate and the total Waitemata rate. The Pacific rate of colorectal cancer mortality rate in Waitemata was similar to both the national Pacific rate and the total Waitemata rate.

**Table 58 Different cancer mortality, 25+ years, age-standardised rates per 100,000 (and 95% confidence intervals), 2003-05**

<b>Gender</b>	<b>Waitemata Pacific</b>	<b>Waitemata Total</b>	<b>NZ Pacific</b>
<b>Lung Cancer</b>			
<b>Female</b>	25.0 (8.1 - 58.3)	25.5 (21.6 - 29.9)	41.8 (31.5–54.4)
<b>Male</b>	96.2 (49.7 - 168.0)	46.8 (41.0 - 53.2)	101.6 (82.5–123.8)
<b>Total</b>	54.0 (31.4 - 86.4)	34.8 (31.4 - 38.5)	66.9 (56.7–78.3)
<b>Breast Cancer</b>			
<b>Female</b>	60.5 (30.2 - 108.3)	35.3 (30.6 - 40.5)	46.7 (36.2 - 59.3)
<b>Cervical Cancer</b>			
<b>Female</b>	26.5 (8.6 - 62.0)	5.2 (3.5 - 7.5)	9.4 (5.1 - 15.7)
<b>Prostate Cancer</b>			
<b>Male</b>	70.2 (28.2 - 144.7)	32.8 (28.1 - 38.1)	39.3 (26.3 - 56.5)
<b>Colorectal Cancer</b>			
<b>Female</b>	*	26.5 (22.6 - 30.9)	23.3 (16.0–32.9)
<b>Male</b>	*	30.0 (25.4 - 35.3)	20.2 (12.8–30.4)
<b>Total</b>	14.3 (4.6 - 33.3)	28.0 (25.0 - 31.3)	22.0 (16.6–28.6)

Source: Health & Disability Intelligence Unit, Ministry of Health \* Rates not presented for groups with small numbers.

## Hospitalisation due to cancer

### All hospitalisations due to cancer

Table 59 shows that the Pacific cancer hospitalisation rate in Waitemata was similar to both the total Waitemata rate and the national Pacific rate. Waitemata Pacific males had cancer hospitalisation rates that were similar to their female counterparts.

**Table 59 All cancer hospitalisations, all ages, age-standardised rates per 100,000 (and 95% confidence intervals), 2005-07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	537.5 (466.4–616.3)	490.2 (476.4–504.2)	638.6 (609.7–668.5)
Male	508.3 (432.4–593.8)	588.7 (572.6–605.1)	554.4 (525.2–584.9)
Total	524.1 (471.6–580.8)	532.9 (522.4–543.5)	595.3 (574.8–616.3)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Hospitalisations due to different cancer

Table 60 shows rates of hospitalisations for lung cancer, breast cancer, cervical cancer and colorectal cancer. The overall Pacific rate for lung cancer hospitalisations in Waitemata was similar to the national Pacific rate but significantly higher than the total Waitemata rate. Other than for Waitemata Pacific people, Males had significantly higher rates than females.

The Pacific breast cancer hospitalisation rate in Waitemata was similar to both the national Pacific rate and the total Waitemata rate. The Pacific cervical cancer hospitalisation rate in Waitemata was similar to both the national Pacific rate and the total Waitemata rate.

The prostate cancer hospitalisation rate for Pacific men in Waitemata appears to be higher than the total Waitemata and national Pacific rate.

The Pacific rate of colorectal cancer hospitalisations in Waitemata was similar to both the national Pacific rate and the total Waitemata population rate.



**Table 60 Different cancer hospitalisation, 25+ years, age-standardised rates per 100,000 (and 95% confidence intervals), 2005-07**

<b>Cancer and Gender</b>	<b>Waitemata Pacific</b>	<b>Waitemata Total</b>	<b>NZ Pacific</b>
<b>Lung Cancer</b>			
<b>Female</b>	48.6 (23.3–89.4)	36.1 (31.3–41.4)	53.1 (41.6–66.8)
<b>Male</b>	138.8 (83.6–216.8)	58.6 (52.0–65.7)	126.4 (105.7–149.8)
<b>Total</b>	85.7 (57.4–123.1)	45.8 (41.9–50.0)	84.7 (73.5–97.2)
<b>Breast Cancer</b>			
<b>Female</b>	171.4 (122.5–233.4)	115.9 (107.0–125.3)	175.4 (155.8–196.8)
<b>Cervical Cancer</b>			
<b>Female</b>	24.8 (10.0–51.0)	18.6 (15.1–22.8)	33.5 (25.3–43.3)
<b>Prostate Cancer</b>			
<b>Male</b>	110.8 (62.0–182.8)	63.4 (56.7–70.7)	75.1 (59.5–93.6)
<b>Colorectal Cancer</b>			
<b>Female</b>	77.1 (39.8–134.7)	59.4 (53.5–65.7)	54.5 (43.2–68.0)
<b>Male</b>	71.4 (28.7–147.2)	78.6 (71.1–86.6)	56.0 (43.4–71.1)
<b>Total</b>	72.5 (43.7–113.3)	68.1 (63.4–73.1)	55.0 (46.5–64.7)

Source: Health & Disability Intelligence Unit, Ministry of Health

## Cancer registration

### Registrations of people different cancers

Table 61 shows registration rates for lung cancer, breast cancer, cervical cancer and colorectal cancer. The Pacific lung cancer registration rate in Waitemata was similar to the national Pacific rate but was significantly higher than the total Waitemata rate. Pacific males had a higher rate than females both nationally and in Waitemata, although the difference only reached statistical significance nationally.

Pacific breast cancer registration rates in Waitemata did not differ significantly from the national Pacific rates or total Waitemata rates. The national Pacific cervical cancer registration rate was significantly higher than the total Waitemata rate.

The Pacific prostate cancer registration rate for Waitemata was similar to both the national Pacific rate and the total Waitemata rate.

Overall, the Pacific rate of colorectal cancer registrations in Waitemata was similar to the national Pacific rate and the total Waitemata rate.

**Table 61 Different cancer registration, 25+ year, age-standardised rates per 100,000 (and 95% confidence intervals), 2003-05**

<b>Cancer and gender</b>	<b>Waitemata Pacific</b>	<b>Waitemata Total</b>	<b>NZ Pacific</b>
<b>Lung Cancer</b>			
<b>Female</b>	48.6 (23.3 - 89.4)	36.1 (31.3 - 41.4)	53.1 (41.6–66.8)
<b>Male</b>	138.8 (83.6 - 216.8)	58.6 (52.0 - 65.7)	126.4 (105.7–149.8)
<b>Total</b>	85.7 (57.4 - 123.1)	45.8 (41.9 - 50.0)	84.7 (73.5–97.2)
<b>Breast Cancer</b>			
<b>Female</b>	113.6 (72.8 - 169.0)	153.2 (142.8 - 164.2)	149.0 (130.3–169.6)
<b>Cervical Cancer</b>			
<b>Female</b>	*	11.1 (8.4 - 14.5)	21.6 (15.0 - 30.2)
<b>Prostate Cancer</b>			
<b>Male</b>	203.8 (130.6 - 303.2)	175.8 (164.2 - 188.1)	164.6 (140.0 - 192.1)
<b>Colorectal Cancer</b>			
<b>Female</b>	46.9 (22.5 - 86.3)	66.9 (60.5 - 73.8)	39.0 (29.4–50.8)
<b>Male</b>	66.6 (26.8 - 137.2)	82.3 (74.5 - 90.8)	36.3 (26.0–49.5)
<b>Total</b>	52.5 (30.6 - 84.1)	73.5 (68.5 - 78.8)	37.4 (30.3–45.7)

Source: Health & Disability Intelligence Unit, Ministry of Health \* Rates not presented for groups with small numbers.

## Respiratory Diseases

### Asthma prevalence

Table 62 shows that about eight percent of Pacific adults reported taking medication for asthma in Waitemata, adjusted for age. This rate was similar from the national Pacific rate and the total Waitemata rate.

**Table 62 Age-standardised prevalence (percent, and 95% confidence intervals) of medicated asthma, adults 15+ years, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	9.4 (5.9 - 14.1)	11.3 (8.8 - 14.1)	11.0 (8.0–14.7)
Male	5.9 (2.8 - 10.7)	8.1 (5.7 - 11.0)	6.9 (4.2–10.5)
Total	7.7 (4.9 - 11.5)	9.7 (7.4 - 12.0)	9.0 (6.9–11.6)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Asthma hospitalisation

Table 63 shows that the Pacific asthma hospitalisation rate for Waitemata and New Zealand was significantly higher than the total Waitemata rate. The Pacific rate in Waitemata was higher than the Pacific rate nationally. All female rates were more than double the male rates.

**Table 63 Asthma hospitalisations, 15+ years, age-standardised rates per 100,000 (and 95% confidence intervals), 2005-07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	410.8 (342.9–488.1)	144.3 (134.6–154.4)	335.8 (312.3–360.7)
Male	203.2 (153.9–263.2)	66.7 (59.9–74.0)	156.1 (140.1–173.5)
Total	314.8 (271.1–363.4)	106.5 (100.6–112.8)	251.4 (236.8–266.7)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Chronic obstructive pulmonary disease prevalence

Table 64 shows that for Pacific in Waitemata 3.2 percent aged 45 years and over reported that they had chronic obstructive pulmonary disease, adjusted for age. This rate was similar to the national Pacific and total Waitemata rates.

**Table 64 Age-standardised prevalence (percent, and 95% confidence intervals) of self-reported chronic obstructive pulmonary disease, 45+ years, 2006/07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	*	7.7 (4.6 - 12.1)	7.4 (3.0–14.8)
Male	*	5.8 (2.4 - 11.6)	4.8 (2.0–9.5)
Total	3.2 (0.3 - 12.1)	6.8 (3.9 - 9.6)	6.2 (3.3–10.4)

Source: Health & Disability Intelligence Unit, Ministry of Health \* Rates not presented for groups with small numbers.

### Chronic obstructive pulmonary disease hospitalisations

Table 65 shows that the Pacific rate of chronic obstructive pulmonary disease hospitalisations in Waitemata was significantly higher than both the national Pacific and the total Waitemata rates. Pacific males had significantly higher (at least twice as high) rates than Pacific females (both in Waitemata and nationally).

**Table 65 COPD hospitalisation, 45+ years, age-standardised rates per 100,000 (and 95% confidence intervals), 2005-07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	1038.0 (826.8–1286.8)	500.4 (475.7–526.0)	848.3 (779.0–922.1)
Male	2217.9 (1838.9–2652.1)	525.4 (497.7–554.2)	1799.9 (1682.1–1923.7)
Total	1515.4 (1314.1–1738.8)	505.9 (487.6–524.7)	1246.6 (1182.6–1313.2)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Injury

#### Unintentional injury mortality

Table 66 shows that Pacific in Waitemata had a significantly lower unintentional injury mortality rate than the national Pacific rate. Nationally Pacific males had a significantly higher rate (three times higher) than Pacific females.

**Table 66 Unintentional injury mortality, all ages, age-standardised rates per 100,000 (and 95% confidence intervals), 2003-05**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	*	9.2 (7.5 - 11.3)	9.9 (6.6–14.2)
Male	17.0 (6.8 - 35.1)	22.1 (18.8 - 25.7)	32.6 (26.3–40.0)
Total	8.1 (3.3 - 16.7)	15.4 (13.6 - 17.4)	20.7 (17.2–24.7)

Source: Health & Disability Intelligence Unit, Ministry of Health; \*Rates not presented for groups with small numbers.

### Unintentional injury hospitalisations

Table 67 shows that the Pacific unintentional injury hospitalisation rate in Waitemata was significantly higher than both the national Pacific and the total Waitemata rates. All males had a significantly higher rate than all females.

**Table 67 Unintentional injury hospitalisation, all ages, age-standardised rates per 100,000 (and 95% confidence intervals), 2005-07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	1342.8 (1239.0–1452.8)	1190.0 (1167.1–1213.3)	1160.6 (1125.5–1196.6)
Male	2831.8 (2679.4–2990.6)	1989.9 (1957.3–2022.9)	2466.2 (2414.0–2519.3)
Total	2067.4 (1975.7–2162.2)	1588.8 (1568.9–1608.8)	1796.0 (1764.8–1827.7)

Source: Health & Disability Intelligence Unit, Ministry of Health

## Older people's health (65+ years)

### Older people's leading causes of mortality

Table 68 shows the five leading causes of mortality for older Pacific people in Waitemata were the same as for Waitemata as a whole: ischaemic heart disease, stroke, diabetes, chronic obstructive pulmonary disease and lung cancer.

**Table 68 Leading causes of mortality, by ethnic group, 65+ years, 2003–05**

Waitemata		Waitemata	
Pacific	Rank	Total	Rank
Ischaemic heart disease	1	Ischaemic heart disease	1
Stroke	2	Stroke	2
Diabetes	3	COPD	3
COPD	4	Diabetes	4
Lung Cancer	5	Lung Cancer	5

Source: Health & Disability Intelligence Unit, Ministry of Health; Note: COPD = chronic obstructive pulmonary disease.

### Older people's leading causes of hospitalisations

Table 69 shows that three of the five leading causes of hospitalisations for older Pacific people in Waitemata were the same as in Waitemata as a whole. These included chronic obstructive pulmonary disease, respiratory infections and ischemic heart disease. Older Pacific people's leading causes of hospitalisations also included Diabetes and Congestive heart failure.

**Table 69 Leading causes of hospitalisations, by ethnic group, 65+ years, 2005–07**

Waitemata		Waitemata	
Pacific	Rank	Total	Rank
COPD	1	Ischaemic heart disease	1
Respiratory infections	2	Falls	2
Diabetes	3	Angina	3
Ischaemic heart disease	4	COPD	4
Congestive heart failure	5	Respiratory infections	5

Source: Health & Disability Intelligence Unit, Ministry of Health; Note: COPD = chronic obstructive pulmonary disease.

### Older people's ischaemic heart disease mortality

Table 70 shows that the Pacific rate of ischaemic heart disease mortality amongst older people in Waitemata was significantly higher than both the total Waitemata and New Zealand Pacific rates. Older Pacific males had a significantly higher rate than older Pacific females.

**Table 70 Ischaemic heart disease mortality, 65+ years, age-standardised rate per 100,000 (and 95% confidence intervals), 2003–05**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	1120.1 (693.4–1712.2)	561.6 (521.6–603.9)	819.8 (685.4–972.8)
Male	2747.0 (1890.9–3857.8)	946.0 (877.7–1018.1)	1519.3 (1298.9–1766.4)
Total	1734.0 (1302.6–2262.4)	728.1 (690.9–766.7)	1108.2 (986.3–1240.9)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Hospitalisations of older people due to ischaemic heart disease

Table 71 shows that the Waitemata ischaemic heart disease hospitalisation rate of older Pacific people was significantly higher than the national Pacific rate. The hospitalisation rate for older Pacific males due to ischaemic heart disease was similar to that of older Pacific females in the Waitemata district which was different from trends shown in the national Pacific and total Waitemata population where male rates were significantly higher than female rates.

**Table 71 Ischaemic heart disease hospitalisation, 65+ years, age-standardised rate per 100,000 (and 95% confidence intervals), 2005–07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	3792.8 (3033.8–4684.1)	2381.8 (2286.6–2479.9)	2257.6 (2043.9–2487.7)
Male	3187.1 (2357.8–4213.5)	4355.4 (4206.6–4508.1)	3191.1 (2898.6–3505.2)
Total	3544.7 (2972.0–4195.6)	3280.2 (3194.8–3367.3)	2656.0 (2479.8–2841.4)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Older people's cerebrovascular disease (stroke) mortality

Table 72 shows that the stroke mortality rate of older Pacific people in Waitemata was similar to both the national Pacific rate and the total Waitemata rate.



**Table 72 Stroke mortality, 65+ years, age-standardised rate per 100,000 (and 95% confidence intervals), 2003–05**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	523.7 (251.1–963.1)	360.7 (328.9–394.7)	650.5 (531.0–788.9)
Male	671.8 (290.0–1323.8)	309.0 (270.6–351.4)	609.8 (473.5–773.0)
Total	585.2 (346.8–924.8)	344.6 (319.7–371.0)	653.2 (559.0–758.8)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Hospitalisations of older people due cerebrovascular disease (stroke)

Table 73 shows that the stroke hospitalisation rate for older Pacific people in Waitemata was significantly higher than both the national Pacific rate and the total Waitemata population rate. Older males had a significantly higher rate than older females among Waitemata total and Pacific nationally.

**Table 73 Stroke hospitalisation, 65+ years, age-standardised rate per 100,000 (and 95% confidence intervals), 2005–07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	1661.6 (1163.7–2300.3)	670.1 (621.9–721.1)	1225.7 (1068.0–1400.1)
Male	2702.4 (1902.8–3725.0)	901.9 (835.7–972.0)	1669.1 (1452.5–1908.9)
Total	2054.5 (1610.4–2583.2)	774.6 (734.6–816.3)	1410.0 (1279.8–1549.7)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Cancer mortality in older people

Table 74 shows the cancer mortality rate for older people for lung cancer, breast cancer, cervical cancer, prostate cancer and colorectal cancer.

The lung cancer mortality rate in Waitemata for older Pacific people was similar to that observed nationally in Pacific and in the total Waitemata population. In Pacific nationally the rate for males was significantly higher than the rate for females.

Nationally the mortality rate of older Pacific women for breast cancer was significantly higher than that observed in the total Waitemata population. The rate of cervical cancer mortality for older women in Waitemata was around 14 per 100,000.

In Waitemata the prostate cancer mortality rate for older Pacific men was similar to both the national Pacific rate and total Waitemata population rate. Overall, the colorectal cancer mortality rate among older Pacific people in Waitemata was similar the national Pacific rate and from the total Waitemata population rate.

**Table 74 Cancer mortality, 65+ years, age-standardised rate per 100,000 (and 95% confidence intervals), 2003–05**

<b>Cancer and gender</b>	<b>Waitemata Pacific</b>	<b>Waitemata Total</b>	<b>NZ Pacific</b>
<b>Lung Cancer</b>			
<b>Female</b>	*	114.5 (93.7–138.4)	178.1 (120.2–254.3)
<b>Male</b>	437.6 (160.6–952.5)	236.8 (203.0–274.8)	515.2 (394.1–661.8)
<b>Total</b>	201.6 (81.0–415.3)	167.0 (148.0–187.7)	315.3 (253.8–387.1)
<b>Breast Cancer</b>			
<b>Female</b>	*	108.1 (88.4–130.9)	286.2 (211.7–378.4)
<b>Cervical Cancer</b>			
<b>Female</b>	*	13.8 (7.1–24.1)	*
<b>Prostate Cancer</b>			
<b>Male</b>	490.0 (197.0–1009.6)	207.6 (176.4–242.7)	268.5 (178.4–388.0)
<b>Colorectal Cancer</b>			
<b>Female</b>	*	264.2 (232.6–298.8)	129.2 (81.0–195.7)
<b>Male</b>	*	376.1 (332.7–423.7)	157.3 (96.1–242.9)
<b>Total</b>	182.1 (66.8–396.4)	312.5 (286.3–340.4)	140.8 (101.5–190.4)

Source: Health & Disability Intelligence Unit, Ministry of Health; \*Rates not presented for groups with small numbers.

### **Hospitalisations of older people due to cancer**

Table 75 shows the cancer hospitalisation rates for lung cancer, breast cancer, cervical cancer, prostate cancer and colorectal cancer.

The lung cancer hospitalisation rate for older Pacific people in Waitemata was similar to that observed in older Pacific people nationally and in the total Waitemata population.

Within Waitemata and nationally the hospitalisation rate of older Pacific women for breast cancer was higher than that observed in the total Waitemata population (but only significantly higher between Pacific women nationally and total Waitemata women). Nationally the hospitalisation rate for cervical cancer in older Pacific women was significantly higher than in the total Waitemata population.

In Waitemata the prostate cancer hospitalisation rate for older Pacific men was similar to both the national Pacific rate and the total Waitemata population rate. Overall, the colorectal cancer mortality rate among older Pacific people in Waitemata did not differ significantly from the national Pacific rate or from the total Waitemata population rate.

**Table 75 Lung cancer hospitalisations, 65+ years, age-standardised rate per 100,000 (and 95% confidence intervals), 2005–07**

<b>Cancer and gender</b>	<b>Waitemata Pacific</b>	<b>Waitemata Total</b>	<b>NZ Pacific</b>
<b>Lung Cancer</b>			
<b>Female</b>	*	163.5 (110.3–233.4)	170.5 (144.0–200.3)
<b>Male</b>	381.4 (140.0–830.2)	522.1 (410.0–655.5)	224.9 (192.2–261.6)
<b>Total</b>	179.6 (72.2–370.1)	318.8 (260.5–386.3)	192.6 (171.9–215.1)
<b>Breast Cancer</b>			
<b>Female</b>	372.9 (170.5–707.9)	229.4 (198.9–263.4)	323.1 (246.6–415.9)
<b>Cervical Cancer</b>			
<b>Female</b>	*	11.5 (5.9–20.1)	65.7 (33.9–114.8)
<b>Prostate Cancer</b>			
<b>Male</b>	397.1 (145.7–864.4)	313.5 (274.6–356.3)	375.7 (278.9–495.4)
<b>Colorectal Cancer</b>			
<b>Female</b>	391.5 (157.4–806.6)	238.9 (172.9–321.8)	304.2 (270.6–340.9)
<b>Male</b>	464.9 (170.6–1011.9)	177.3 (109.7–271.0)	377.8 (335.1–424.5)
<b>Total</b>	412.4 (219.6–705.3)	208.8 (160.8–266.6)	335.8 (309.0–364.3)

Source: Health & Disability Intelligence Unit, Ministry of Health; \*Rates not presented for groups with small numbers.

### Registrations of older people with cancer

Table 76 shows the registration rates for lung cancer, breast cancer, cervical cancer, prostate cancer and colorectal cancer.

The lung cancer registration rate for older Pacific people in Waitemata was similar to that observed in older Pacific people nationally and in older people in Waitemata as a whole. Older males (Pacific nationally and Waitemata total) had a significantly higher rate than older females.

The rate of breast cancer registrations of older Pacific women nationally did not differ significantly to that observed in the total Waitemata population. The rate of cervical cancer registration for older Pacific women nationally was significantly higher than the total Waitemata rate,

In Waitemata the prostate cancer registration rate for older Pacific men did not differ significantly from the national rate.

The colorectal cancer registration rate for older Pacific people in Waitemata was similar to that observed in older Pacific people nationally and in older people in Waitemata as a whole. Overall, in Waitemata older men had a significantly higher rate than older women.

**Table 76 Cancer registrations, 65+ years, age-standardised rates per 100,000 (and 95% confidence intervals), 2003–05**

<b>Cancer and gender</b>	<b>Waitemata Pacific</b>	<b>Waitemata Total</b>	<b>NZ Pacific</b>
<b>Lung Cancer</b>			
<b>Female</b>	*	143.5 (119.8–170.5)	188.6 (129.0–266.3)
<b>Male</b>	577.1 (249.2–1137.2)	272.3 (236.0–312.7)	600.6 (473.2–751.8)
<b>Total</b>	285.3 (136.8–524.7)	197.6 (176.8–220.1)	361.8 (296.8–436.8)
<b>Breast Cancer</b>			
<b>Female</b>	*	274.8 (241.1–311.8)	286.2 (211.7–378.4)
<b>Cervical Cancer</b>			
<b>Female</b>	*	9.9 (4.3–19.5)	40.8 (16.4–84.0)
<b>Prostate Cancer</b>			
<b>Male</b>	922.5 (491.2–1577.5)	743.8 (681.3–810.4)	890.4 (733.8–1070.5)
<b>Colorectal Cancer</b>			
<b>Female</b>	*	264.2 (232.6–298.8)	129.2 (81.0–195.7)
<b>Male</b>	*	376.1 (332.7–423.7)	157.3 (96.1–242.9)
<b>Total</b>	182.1 (66.8–396.4)	312.5 (286.3–340.4)	140.8 (101.5–190.4)

Source: Health & Disability Intelligence Unit, Ministry of Health; \*Rates not presented for groups with small numbers.

### Older people's chronic obstructive pulmonary disease mortality

Table 77 shows that the chronic obstructive pulmonary disease (COPD) mortality rate for older Pacific people in Waitemata was similar to both the national Pacific rate and the total Waitemata population rate. Older men (Waitemata total and national Pacific) had a significantly higher rate than older women.

**Table 77 COPD mortality, 65+ years, age-standardised rate per 100,000 (and 95% confidence intervals), 2003–05**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	362.9 (145.9–747.6)	169.2 (145.5–195.7)	227.2 (160.0–313.2)
Male	*	306.8 (268.6–348.9)	563.2 (427.7–728.1)
Total	321.1 (154.0–590.4)	221.7 (200.9–244.2)	354.0 (286.4–432.8)

Source: Health & Disability Intelligence Unit, Ministry of Health; \*Rates not presented for groups with small numbers.

### Older people's chronic obstructive pulmonary disease hospitalisations

Table 78 shows that the hospitalisation rate for chronic obstructive pulmonary disease among older Pacific people in Waitemata was significantly higher than the national Pacific rate and the total Waitemata rate. Older men had significantly higher rates than older women.

**Table 78 COPD hospitalisation, 65+ years, age-standardised rate per 100,000 (and 95% confidence intervals), 2005–07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	2410.9 (1795.1–3169.9)	1149.8 (1083.8–1218.7)	1880.9 (1684.3–2094.2)
Male	6704.6 (5449.2–8162.7)	1444.3 (1360.3–1532.0)	5063.0 (4683.2–5465.4)
Total	4160.1 (3521.0–4881.6)	1270.2 (1218.2–1324.0)	3212.7 (3015.7–3419.2)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Older people's hospitalisations related to falls

Table 79 shows that the hospitalisation rate due to falls for older Pacific people in Waitemata was higher (though not significantly) than the national Pacific rate. Overall in Waitemata older females had a significantly higher rate than older males (this pattern was not significant for older Pacific women in Waitemata).



**Table 79 hospitalisation due to falls, 65+ years, age-standardised rate per 100,000 (and 95% confidence intervals), 2005–07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	1970.2 (1420.0–2663.2)	2461.5 (2372.3–2553.1)	1357.7 (1190.0–1542.4)
Male	1642.5 (1041.2–2464.6)	1811.7 (1718.2–1909.0)	1440.0 (1231.7–1673.5)
Total	1862.0 (1437.0–2373.2)	2195.6 (2130.3–2262.4)	1393.8 (1261.5–1536.2)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Older people's hospitalisations due to musculoskeletal disease

Table 80 shows that the hospitalisation rate due to musculoskeletal disease was similar for older Pacific people in Waitemata, total Waitemata and Pacific nationally. Older women in the total Waitemata population had a significantly higher rate than older men.

**Table 80 Musculoskeletal disease hospitalisation, 65+ years, age-standardised rate per 100,000 (and 95% confidence intervals), 2005–07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	2581.9 (1960.6–3337.7)	2256.3 (2161.1–2354.6)	2206.3 (1995.3–2433.5)
Male	2502.9 (1803.9–3383.2)	2040.6 (1938.9–2146.3)	2509.3 (2251.5–2788.6)
Total	2570.3 (2091.3–3126.2)	2159.2 (2089.5–2230.7)	2339.5 (2174.5–2513.8)

Source: Health & Disability Intelligence Unit, Ministry of Health

## Other (Health Services)

### Primary Care

#### Pacific Providers and Pacific Provider Workforce

Waitemata has two Pacific Health Providers one in Waitakere City (West Fono Health Trust) and one in the North Shore (Pasifika Integrated Healthcare). Both providers offer primary health care services to the Pacific populations within each City.

West Fono is a Pacific health community trust, and provides a range of services in mental health, community and outreach services, and GP services. Its mission statement is to “develop and provide, quality, affordable, accessible and culturally appropriate service that improves and contributes to best health outcomes for Pacific People in West Auckland.” As member of the Healthwest PHO, West Fono serves a total population of 7000 people in West Auckland, making up 47.9% of the Pacific population enrolled with Healthwest PHO. West Fono has a total of 93% of Pacific clients and 7% that are non-Pacific. 86% of their clients are enrolled; the remaining 14% are casual clients.

West Fono has a total of 40 staff (36 Full Time Equivalents [FTEs]): a management and administration team of 7, a GP clinic serviced by 8 GPs, 8 Practice nurses and a community team provides outreach services to the community that complements the GP clinic, with a total of 11 community health workers and 6 mental health support workers.

The Pasifika Integrated Healthcare (PIHC) is a limited liability company and provides two arms of healthcare services in Primary Healthcare and Home Based Support Services both at a regional and local level on the North Shore. The core business of PIHC is Home Based Support Services, which are delivered across the Auckland region, and funded by several streams from the Ministry of Health, Auckland and Waitemata DHBs. To date they provide service to about 100 funded clients within the Waitemata area.

PIHC also provides primary healthcare services through its community outreach clinic and the recent establishment of its GP service. The nurse led outreach clinic provides health promotion and CVD risk assessments to the Pacific community groups on the North Shore, however also caters for the needs of local non-Pacific people.

The Pasifika Family Medical Centre has been operating since early 2007 and has an enrolled population of 1738. The service consists of a total of 19 staff (17 FTEs): a management and administration team of 8, primary healthcare team of 5 community health workers and 2 nurses, a GP clinic of 2 GPs, 2 practice nurses, in addition to a home based support service workforce.

#### Primary health organisations

Primary Health Organisations (PHOs) are the local structures for delivering and coordinating primary health care services. PHOs bring together doctors, nurses and other health professionals in the community to serve the needs of their enrolled populations. Other professionals include Maori health workers, health promotion workers, dieticians, pharmacists, physiotherapists, psychologists,

midwives, and other allied health professionals. PHOs vary widely in size and structure. All PHOs must provide essential primary health care services to their local enrolled populations.

In the Waitemata district, there are six established PHOs which provide primary health care services to their enrolled populations. They are: Coast to Coast PHO (North Rodney); Harbour Health; HealthWest; Procure Network North Ltd; Te Puna PHO and Waiora Healthcare Trust.

### Primary health organisation (PHO) enrolment coverage

Table 81 shows that just over 90 percent of Pacific adults in the Waitemata district were enrolled with a Primary Health Organisation, which was similar to the national Pacific rate and the total Waitemata rate.

**Table 81 PHO enrolment coverage, 15+ years, age-standardised percent (and 95% confidence intervals), by ethnicity, 2006/07 NZHS**

Gender	Waitemata percent	New Zealand percent
Female	93.1 (90.5 - 95.2)	94.5 (93.6 - 95.3)
Male	89.9 (87.4 - 92.2)	91.3 (90.2 - 92.3)
Total	91.6 (89.4 - 93.8)	93.0 (92.4 - 93.5)
Pacific	90.7 (87.1 - 93.6)	91.1 (87.1 - 94.2)

Source: Health & Disability Intelligence Unit, Ministry of Health;\* Ethnicity was based on total response.

### General practitioner utilisation

#### Adult (15 years and over) visits to a general practitioner

Table 82 shows that around 77 percent of Pacific adults in Waitemata saw a general practitioner (GP) in the preceding 12 months; this was similar to the national Pacific prevalence and the total Waitemata, adjusted for age.

**Table 82 Age-standardised prevalence rates (and 95% confidence intervals) of visit to a general practitioner, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	78.4 (72.7 - 83.3)	83.0 (79.1 - 86.5)	78.5 (74.2–82.3)
Male	75.6 (69.6 - 81.0)	76.8 (72.8 - 80.4)	75.7 (70.9–80.1)
Total	77.1 (72.0 - 81.6)	80.0 (76.6 - 83.5)	77.2 (73.7–80.4)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Adults' unmet need for general practitioner

Table 83 shows that the Pacific adult prevalence of unmet need for a general practitioner (GP; i.e. needed to see a GP but had not done so for any reason) in the preceding 12 months in Waitemata was similar to the prevalence for Pacific nationally. Pacific males and Pacific overall in Waitemata were more likely to experience unmet need for a GP than the total population in Waitemata, adjusted for age.

**Table 83 Age-standardised prevalence rates (and 95% confidence intervals) of unmet need for general practitioner, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	14.1 (10.4 - 18.6)	8.7 (6.8 - 10.9)	12.7 (9.4–16.6)
Male	12.6 (9.1 - 16.8)	6.4 (4.5 - 8.7)	11.3 (8.3–15.0)
Total	13.4 (10.3 - 17.1)	7.6 (5.7 - 9.5)	12.0 (9.4–15.1)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Primary health care nurse utilisation

#### Adults (15 years and over) visits to a primary health care nurse

Table 84 shows that 31% of Pacific people in Waitemata had visited a primary health care nurse in the preceding 12 months, which was similar to the national Pacific rate and the total Waitemata population, adjusted for age. Pacific Females in Waitemata were more likely (though not significantly more likely) to visit a primary health care nurse in the preceding 12 months than Pacific males, adjusted for age.

**Table 84 Age-standardised prevalence rates (and 95% confidence intervals) of visits to a primary health care nurse, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	36.8 (30.1 - 43.8)	43.2 (39.5 - 47.0)	38.7 (32.7–44.9)
Male	24.9 (19.1 - 31.5)	31.5 (27.9 - 35.2)	26.2 (21.1–31.8)
Total	31.1 (26.0 - 36.6)	37.6 (33.1 - 39.7)	32.7 (28.6–37.1)

Source: Health & Disability Intelligence Unit, Ministry of Health

## Dentist

### Use of dentist or other oral health care worker

Table 85 shows that only around 33 percent of Pacific adults in Waitemata had seen an oral health care worker in the preceding 12 months, adjusted for age. This rate was similar to the national Pacific rate but significantly less than the total Waitemata rate.

**Table 85 Age-standardised prevalence rates (and 95% confidence intervals) of use of oral health care worker, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	33.1 (27.2 - 39.4)	52.5 (48.5 - 56.5)	33.6 (28.7–38.9)
Male	33.0 (27.1 - 39.3)	45.6 (41.5 - 49.8)	33.5 (28.6–38.8)
Total	33.1 (28.2 - 38.2)	49.2 (45.6 - 52.8)	33.6 (30.0–37.3)

Source: Health & Disability Intelligence Unit, Ministry of Health

## Complementary health services

Some types of complementary / alternative health care include osteopathy, chiropractic, acupuncture, herbal medicine, homeopathy and naturopathy. Chiropractic services and osteopathy are professions regulated under the Health Practitioners Competence Assurance Act 2003. In the Waitemata district, there are about 5 registered osteopathy practitioners and 8 registered chiropractic practitioners. There are also other types of complementary health practitioners who provide their services in the district.

### Use of complementary health services

Table 86 shows that the prevalence of use of a complementary / alternative health care worker in the preceding 12 months among Pacific people in Waitemata was 11.5% which was similar to the national Pacific rate (13.3%) but lower (almost half, though not significantly lower) than the prevalence among total Waitemata, adjusted for age.

**Table 86 Age-standardised prevalence rates (and 95% confidence intervals) of use of complementary health services, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	14.6 (5.9 - 28.1)	25.3 (20.9 - 29.8)	16.5 (12.3–20.7)
Male	7.8 (0.2 - 37.7)	15.0 (11.0 - 19.0)	9.8 (6.5–13.2)
Total	11.5 (4.1 - 24.0)	20.4 (17.0 - 23.7)	13.3 (10.8–15.8)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Preventative care

#### Immunisation coverage at 2 years

Fully immunised at age two years means that, by the age of two, a child has had four doses of diphtheria, tetanus and acellular pertussis vaccine, three doses of polio vaccine, three doses of Haemophilus influenzae type b vaccine, three doses of hepatitis B vaccine (or four doses including neonatal doses if required), and one dose of measles, mumps and rubella vaccine. (Note: Vaccine schedule changes mean this definition will change from time to time – including in 2008 with the addition of Pneumococcal vaccine).

Table 87 shows that in Waitemata, just over three-quarters of Pacific children in 2007 had received all specified immunisation vaccines, by the age of two, which was higher than the national Pacific rate but slightly lower than the total Waitemata rate.

**Table 87 Full immunisation coverage at age two years, percent, by ethnicity\*, 2007**

Ethnicity	Waitemata	New Zealand
Pacific	75.6	67.6
Total	78.6	71.2

Source: Health & Disability Intelligence Unit, Ministry of Health

### Blood pressure screening

Table 88 shows that almost two thirds of Pacific adults in Waitemata had their blood pressure checked in the preceding 12 months. This rate was similar to both the national Pacific and the total Waitemata rates, adjusted for age.

**Table 88 Age-standardised prevalence rates (and 95% confidence intervals) of blood pressure checks, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	69.5 (60.9 - 77.3)	67.7 (63.0 - 72.2)	63.7 (56.5–70.5)
Male	61.4 (54.0 - 68.4)	65.0 (60.2 - 69.6)	56.3 (50.3–62.1)
Total	65.7 (59.2 - 71.9)	66.5 (59.3 - 67.7)	60.3 (55.3–65.0)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Cholesterol screening

Table 89 shows that just over a third of Pacific adults in Waitemata have had a cholesterol check in the preceding 12 months. This rate was similar to both the national Pacific and the total Waitemata rates.

**Table 89 Age-standardised prevalence rates (and 95% confidence intervals) of cholesterol check, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	32.9 (26.6 - 39.8)	32.6 (28.7 - 36.7)	27.0 (21.8–32.7)
Male	36.3 (30.1 - 42.8)	43.1 (39.1 - 47.2)	29.7 (24.7–35.1)
Total	34.5 (29.3 - 40.0)	37.3 (30.6 - 38.0)	28.3 (24.5–32.3)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Diabetes screening

Table 90 shows that 30% of Pacific people in Waitemata had a diabetes check in the preceding 12 months this rate was similar to both the national Pacific and the total Waitemata rates, adjusted for age.

**Table 90 Age-standardised prevalence rates (and 95% confidence intervals) of diabetes check, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	27.0 (12.7 - 45.8)	18.8 (15.4 - 22.2)	36.8 (31.4–42.1)
Male	33.8 (17.1 - 54.2)	24.9 (20.2 - 29.6)	34.4 (28.6–40.1)
Total	30.0 (18.5 - 43.9)	21.5 (18.7 - 24.3)	35.6 (32.0–39.3)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Diabetes free annual check

Table 91 shows that 62% of Pacific people in Waitemata were estimated to have had a diabetes free annual check. This was a lot lower than the coverage of Pacific people in other Auckland regional District Health Board (DHB) areas but higher than that for the total Waitemata population.

**Table 91 Percentage of DHB area population estimated to have diagnosed diabetes that had free annual diabetes checks in the twelve months to December 2007**

DHB Area	Pacific	Total
Waitemata	62%	47%
Auckland	102%	72%
Counties Manukau	133%	97%

Source: 2007/08 Quarter Two Health Target data, Ministry of Health.

### Satisfactory or better diabetes management

Table 92 shows that of the Waitemata Pacific people on the diabetes register close to 60% had satisfactory or better diabetes management. This rate was comparable to Pacific people in other Auckland region DHB areas but much lower than the total Waitemata population.



**Table 92 Percentage of people on the diabetes register, for each DHB area, who had satisfactory or better diabetes management rating in the twelve months to December 2007**

DHB area	Pacific	Total
<b>Waitemata</b>	<b>59%</b>	<b>79%</b>
Auckland	62%	76%
Counties Manukau	48%	63%

Source: 2007/08 Quarter Two Health Target data, Ministry of Health.

### Retinal screening

Table 93 shows that 71% of Pacific people in Waitemata on the diabetes register had retinal screening in the two years to December 2007. This percentage was slightly higher than in other Auckland region DHB areas and exactly the same as the total Waitemata percentage.

**Table 93 Percentage of people on the diabetes register, for each DHB, who have had retinal screening in the two years to September 2007\*\***

DHB area	Pacific	Total
<b>Waitemata</b>	<b>71%</b>	<b>71%</b>
Auckland	67%	62%
Counties Manukau	64%	65%

Source: 2007/08 Quarter Two Health Target data, Ministry of Health. \*\* As measured at December 2007

### Breast screening

Table 94 shows that around 48 percent of Pacific women in the Waitemata district aged 45 to 69 years had a mammogram to check for early signs of breast cancer, which was similar to the national Pacific percentage (44.7). The Waitemata Pacific screening coverage rate was lower than for the total Waitemata population.

**Table 94 Breast screening coverage rate (percent, and 95% confidence interval), women 45-69 years, 2006-2007**

	Pacific	Total
<b>Waitemata</b>	47.6 (45.1 - 50.1)	53.8 (53.3 - 54.3)
<b>New Zealand</b>	44.7 (43.8 - 45.6)	57.6 (57.2 - 57.8)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Cervical screening

Table 95 shows that of Pacific women in Waitemata aged 20-69 yrs who had a primary health care provider, 55.4% had a cervical smear in last 3 years. This prevalence was similar to both the national Pacific and the total Waitemata rates, adjusted for age.

**Table 95 Had cervical smear in last 3 years (age-standardised percent, and 95% confidence interval), of women 20-69 yrs who had a primary health care provider, 2006/07 NZHS, by ethnicity**

	Pacific	Total
<b>Waitemata</b>	55.4 (36.1 - 74.6)	76.4 (71.2 - 81.5)
<b>New Zealand</b>	61.3 (56.0 - 66.6)	78.4 (76.6 - 80.3)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Pharmacy

#### Prescriptions

Table 96 shows that 75% of Waitemata Pacific people received a prescription in the preceding 12 months this rate was similar to both the national Pacific and total Waitemata rates. Adult females in Waitemata were significantly more likely to have received a prescription in the preceding 12 months than their male counterparts, adjusted for age. This pattern was present but not significant for Pacific people in Waitemata or nationally.

**Table 96 Age-standardised prevalence rates (and 95% confidence intervals) of prescription received in preceding 12 months, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
<b>Female</b>	79.9 (73.1 - 85.6)	80.8 (75.6 - 85.3)	78.2 (73.7-82.3)
<b>Male</b>	69.9 (62.3 - 76.8)	70.3 (65.2 - 75.1)	68.5 (62.6-73.9)
<b>Total</b>	75.1 (68.9 - 80.7)	75.8 (69.6 - 78.6)	73.6 (69.7-77.2)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Community Services Card holders

The purpose of the Community Services Card was to reduce the amount families on low to modest incomes pay for some health services and prescriptions. Table 97 shows that of those enrolled with a

PHO, 30.9 percent of Pacific residents in Waitemata were Community Service Card holders, compared with 34.5 percent of Pacific people nationally.

**Table 97 PHO enrollee Community Services Card holders, percent, by ethnicity, April 2008\***

	<b>Waitemata percent</b>	<b>New Zealand percent</b>
<b>Female</b>	24.6	29.9
<b>Male</b>	19.1	23.6
<b>Total</b>	22.0	26.9
<b>Pacific</b>	30.9	34.5

Source: Health & Disability Intelligence Unit, Ministry of Health; \* Data was reported as at April 2008. Ethnicity was prioritised ethnicity.

### **High Use Health Card Holders**

The High Use Health Card was introduced to help people who do not have a Community Services Card, but who have ongoing health problems that mean they visit a doctor often. People who have made 12 or more visits to a doctor in the previous 12 months are entitled to apply for this card.

Table 98 shows that of those enrolled with a PHO, 0.3 percent of Pacific residents in Waitemata held a High Use Health Card, compared with 0.7 (both the national Pacific and the total Waitemata rates). High Use Health Card use was lower in Waitemata than in New Zealand.

**Table 98 PHO enrollee High Use Health Card holders, percent, by ethnicity, April 2008\***

	<b>Waitemata percent</b>	<b>New Zealand percent</b>
<b>Female</b>	0.8	1.3
<b>Male</b>	0.6	1.0
<b>Total</b>	0.7	1.2
<b>Pacific</b>	0.3	0.7

Source: Health & Disability Intelligence Unit, Ministry of Health; \* Data was reported as at April 2008. Ethnicity was prioritised ethnicity.

## Secondary Care

### Use of a public hospital

Table 99 shows that 13 percent of Pacific adults in Waitemata reported having been admitted to a public hospital (excluding the emergency department) in the preceding 12 months; this was similar to both the national Pacific and the total Waitemata prevalence, adjusted for age.

**Table 99 Age-standardised prevalence rates (percent, and 95% confidence intervals) of use of public hospital (excluding emergency department), 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	15.8 (11.2 - 21.3)	16.0 (13.7 - 18.5)	19.5 (15.2–24.4)
Male	10.0 (5.8 - 15.9)	12.1 (9.8 - 14.7)	12.4 (8.3–17.6)
Total	13.0 (9.6 - 17.2)	14.2 (11.2 - 15.2)	16.1 (13.0–19.6)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Hospital readmissions rate

Table 100 shows that the Pacific rate of acute readmissions in Waitemata was similar to both the national Pacific and total Waitemata rates.

**Table 100 Acute readmissions, all ages, age-standardised rate per 1000 admissions (and 95% confidence intervals), by ethnicity, 2005-2007**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	27.1 (23.8 - 30.8)	26.8 (25.9 - 27.8)	27.4 (26.1–28.7)
Male	34.1 (29.6 - 39.2)	30.3 (29.1 - 31.5)	30.5 (29.0–32.2)
Total	29.7 (27.0 - 32.6)	27.7 (27.0 - 28.5)	28.9 (27.9–30.0)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Number of patients discharged following elective surgery

Table 101 shows that the Pacific rate of elective surgery discharges in Waitemata was significantly lower than the national Pacific rate but significantly higher than the total Waitemata rate. The total Waitemata rate for males was significantly higher than the rate for females, whereas the rate for Pacific males (Waitemata and New Zealand) was less than the rate for females (differences only significant for New Zealand).

**Table 101 Age-standardised rates per 100,000 (and 95% confidence intervals) of elective surgery discharges at public hospital, by ethnicity, 2005-07**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
Female	3365.2 (3196.7 - 3540.3)	2595.0 (2560.4 - 2629.9)	4161.3 (4092.4–4231.1)
Male	3115.1 (2950.5 - 3286.5)	2672.5 (2635.6 - 2709.9)	3327.4 (3264.7–3391.0)
Total	3268.8 (3149.5 - 3391.4)	2633.1 (2607.8 - 2658.6)	3761.2 (3714.3–3808.4)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Use of medical specialist

Information about medical specialists was drawn from the New Zealand Health Survey. A medical specialist was defined here as a doctor who specialises in a branch of medicine other than general practice, working in either a public hospital or a private clinic. When survey participants were asked about whether they had seen a medical specialist in the preceding twelve months, they were asked to exclude medical specialists they had seen as an inpatient at a hospital.

Table 102 shows that about 18 percent of Pacific adults in Waitemata reported seeing a medical specialist in the preceding 12 months; this rate was similar to the national Pacific rate. Within Waitemata the use of a specialist in the preceding 12 months among Pacific people was significantly lower than the use among the total population, adjusted for age.

**Table 102 Age-standardised prevalence rates (and 95% confidence intervals) of use of specialist, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
<b>Female</b>	19.4 (14.4 - 25.2)	32.2 (28.7 - 35.7)	19.5 (15.4–24.2)
<b>Male</b>	16.9 (11.7 - 23.3)	28.3 (24.7 - 32.0)	17.0 (12.6–22.2)
<b>Total</b>	18.2 (13.9 - 23.3)	30.3 (25.5 - 31.8)	18.3 (15.0–22.0)

Source: Health & Disability Intelligence Unit, Ministry of Health

### Public hospital Emergency Departments

Table 103 shows that 7.6 percent of Pacific adults in Waitemata reported presenting at the emergency department of a public hospital in the preceding 12 months, adjusted for age. This rate was similar to both the national Pacific rate and the total Waitemata rate.

**Table 103 Age-standardised prevalence rates (percent, and 95% confidence intervals) of use of ED at public hospital, 15+ years, by ethnicity, 2006/07 NZHS**

Gender	Waitemata Pacific	Waitemata Total	NZ Pacific
<b>Female</b>	7.3 (4.2 - 11.7)	6.4 (4.5 - 8.8)	8.9 (6.0–12.4)
<b>Male</b>	7.9 (4.1 - 13.4)	7.7 (5.7 - 10.2)	9.5 (5.9–14.3)
<b>Total</b>	7.6 (4.7 - 11.4)	7.0 (5.1 - 8.9)	9.2 (6.7–12.2)

Source: Health & Disability Intelligence Unit, Ministry of Health

## Mental Health

### Mental health services

Table 104 shows that for Waitemata the number of actual FTEs was 614 as at 31 March 2008. This was 106 percent of the number of service level agreement FTEs, which was higher than the percentage across other Auckland DHB providers in total (96 percent).

**Table 104 Mental Health FTEs for 2007/08, as at 31 March 2008.**

District Health Board	Full Time Equivalents		
	March Quarter		
	Service Level Agreement	Actual	Percentage
<b>Waitemata</b>	<b>581</b>	<b>614</b>	<b>106%</b>
Auckland	428	406	95%
Counties Manukau	349	345	99%
Total	3,763	3,602	96%

Source: Health & Disability Intelligence Unit, Ministry of Health

In addition to DHB providers, non-government organisations (NGOs) also provide mental health services. Table 105 shows the number of NGOs contracted to provide services for each DHB for 2007/08, including the numbers which hold direct contracts with the Ministry of Health.

**Table 105 Number of NGOs contracted to provide mental health services, by funder DHB / Ministry of Health, for 2007/08.**

DHB	Number of NGOs contracted with this DHB
<b>Waitemata</b>	<b>37</b>
Auckland	40
Counties Manukau	27

Source: Health & Disability Intelligence Unit, Ministry of Health

### Use of secondary mental health services

Table 106 shows us that in 2007, 2.2 percent of the Pacific population in Waitemata accessed secondary mental health and addiction services, which was higher than the national Pacific percentage (1.8 percent), but less than the Waitemata total rate ( 2.4%) for people aged under 65 years.

After adjusting for age, the rate of access to mental health and addiction services for Pacific people living in the Waitemata district in 2007 was significantly higher to the rate for the national Pacific population as a whole, for people aged less than 65 years.

**Table 106 Access to secondary mental health and addiction services, for people aged 0-64 years, by ethnicity, 2007**

		<b>Pacific</b>	<b>Total</b>
<b>Waitemata</b>	Number of people seen	681	10392
	Access rate (%)	2.2	2.4
	Age-standardised rate (per 100,000) and 95% CI	2297.6 (2128.2 - 2476.8)	2289.1 (2245.3 - 2333.5)
<b>New Zealand</b>	Number of people seen	4097	85617
	Access rate (%)	1.8	2.4
	Age-standardised rate (per 100,000) and 95% CI	1855.3 (1798.9 - 1913.0)	2310.3 (2294.8 - 2325.8)

Source: Health & Disability Intelligence Unit, Ministry of Health; **Definitions** Data source Mental Health Information National Collection (MHINC), Ministry of Health. Number of people seen-The number of people seen by secondary mental health and addiction services during the year, aged 0-64 years, who live in the specified DHB district. People are grouped by their age and ethnicity as at the end of the year. The analysis did not include data for people aged 65 years and over, as data are not completely reported for people in this age group across New Zealand. Access rate (%) was the percentage (crude rate) of the population seen during the year (of people living in the specified DHB district aged 0-64 years) by secondary mental health and addiction services. Age-standardised rate-The rate of access to secondary mental health and addiction services for people aged 0-64 years per 100,000 population, after adjusting for age. See the methodology section for more information about age-standardised rates (and 95 percent confidence intervals).

### **New admissions to acute mental health services**

Table 107 shows that out of all Pacific people seen by mental health and addiction services in 2007 that lived in the Waitemata district, less than one percent (0.6 percent) had an acute inpatient admission as their first contact with these services, for people aged less than 65 years. This was similar to the national Pacific percentage (0.5 percent) but higher than that for Waitemata as a whole (0.2%). It should be noted that the absolute numbers involved are very small.



**Table 107 People with an acute inpatient admission as first contact with secondary mental health and addiction services, for people aged 0-64 years, by ethnicity, 2007**

		<b>Pacific</b>	<b>Total</b>
<b>Waitemata</b>	Number of people seen - all services	681	10392
	Number of people seen - acute inpatient admission as first contact	4	21
	Percent of people seen - acute inpatient admission as first contact	0.6%	0.2%
<b>New Zealand</b>	Number of people seen - all services	4097	85617
	Number of people seen - acute inpatient admission as first contact	20	468
	Percent of all people seen who had an acute inpatient admission as first contact	0.5%	0.5%

Source: Health & Disability Intelligence Unit, Ministry of Health

### **Public health services**

Public health services provide services aimed at improving and maintaining positive health of the population and preventing illness.

Public health services in the Waitemata district are mainly provided by the Auckland Regional Public Health Service, although local Primary Health Organisations and NGOs also provide some public health services. The Auckland Regional Public Health Service covers the populations in Counties Manukau, Auckland and Waitemata. It delivers a range of public health services, such as health promotion, health protection, Maori and Pacific health, healthy environment, screening and health information. Table 108 below provides the information about staff positions and numbers in the

Auckland Regional Public Health Service. Four Pacific people work in the area of Pacific health promotion.

**Table 108 Positions and numbers of staff in the Auckland Regional Public Health Service**

<b>Position</b>	<b>Number of full-time staff</b>	<b>Number of part-time Staff</b>
Total Health Promotion	30	5
Maori Health Promotion*	9	1
Pacific Health Promotion*	3	1
Health Protection	23	1
Public Health Nurse	26	12
Medical officer	13	2
Analyst	15	1
Other Health Professionals	11	2
Other Support Worker	45	6
Manager and Team leader	10	1
Total staff*	185	32

Source: Health & Disability Intelligence Unit, Ministry of Health

- \* Notes: 1. Staff who identify as Maori ethnicity, not by Maori for Maori positions.  
 2. Staff who identify as Pacific, not by Pacific for Pacific positions.  
 3. The figures above exclude vacancies and newly funded positions.

## Appendices

These appendices contain information on the community consultations, the Fonofale model of health, further information about ethnicity classification, the WHO world population weights, and information about data sources.

### Appendix 1-Community consultation

#### Round I-August 2008

Purpose: Obtain community input into structure and content of Pacific HNA

Format:

- 1) Introductions, prayer and food
- 2) Presentation
- 3) Group Discussion on format and content

Attendance:

North Shore-5<sup>th</sup> August 2008-6 community members and 5 WDHB staff (John, Lita, Dorothy, Vanessa, Imelda).

Waitakere City-7<sup>th</sup> August 2008-30 community members and 6 WDHB staff (John, Lita, Dorothy, Vanessa, Tom, Imelda)

Key suggestions and response to these below.

#### 5<sup>th</sup> August (North Shore City)

Suggestions	Response
Trend analysis to see if there are any changes from last HNA to now	Not possible as Pacific HNA not done in past
Area analysis of particular indicators/issues and conditions	Done in Overall HNA
Provide both age group and ethnicity analysis to some degree	Done
Include participation in decision making to be included in content	Done
Arrange contents in a Pacific Health Model Framework such as the Fonofale or Fonua model	Fonofale model used
Provide information about health education and health promotion in district (by ARPHS, PHOs and other providers)	Done
Acknowledge family unit and how family operates on a daily basis	No data available

### 7<sup>th</sup> August (Waitakere City)

Suggestions	Response
Really strong focus on young people (children and youth)	Partly done because up to data was not available
Both ethnicity and age group analysis	Done
Pacific youth should encompass those up to age 29 years (or unmarried)	Decided to use up to age 24 years
Present positives – not just negatives	Done where possible
Provide information on Tuvaluans as they make up a lot of patients in Waitakere	Done
Provide information on I-Kiribati and Solomon Island health status	Not possible
Fill in gaps in CMDHB's Pacific HNA	Not possible with our sample size of Pacific people

### Round-II November 2008

Purpose: Provide information about other important health needs of Waitemata's Pacific communities (apart from what was presented in draft Pacific HNA)

Format:

- 1) Introductions and prayer
- 2) Presentation
- 3) Ethnic Group Discussions on important health needs
- 4) Food

Attendance:

North Shore-10<sup>th</sup> November 2008-20 community members and 5 WDHB staff (John, Lita, Dorothy, Vanessa, Imelda) plus Karl Gatoloai and Doreen Arapai.

Waitakere City-12<sup>th</sup> November 2008-30 community members and 6 WDHB staff (John, Lita, Dorothy, Vanessa, Duncan, Branko) plus Rita Harder.

### 10<sup>th</sup> November (North Shore City)

The Key themes/Issues are below. They are categorised into written feedback and language group feedback.

#### Written feedback

1. Safety
  - Feeling safe in the home and in the street. There was anxiety around the violence that was erupting in society.
2. Women's health
  - Obesity and not enough money to buy proper food.

3. The lack of interpreters for Pacific people in the hospital.
  - Re-introduce the cultural support service
4. The health needs of Pacific people on the Shore need to be addressed separately from Waitakere.
  - The perception was that the numbers are small therefore the needs are not so great or are invisible. Research needs to separate out statistics so that funding can be properly allocated. Waitakere swallows all the funds.
5. Transport was an issue for some people.
6. The people who attend the meetings can only voice an opinion from a well person's perspective.
  - It is a person who is burdened by ill health, with English as a second language, low income who can best tell you what the reality is.
7. A Pacific person discharged from hospital
  - Often does not have the benefit of a discharge plan and a proper explanation of their medical condition and reasons for the medication that has been charted, they are at high risk of being readmitted to hospital.
8. Is there a Pacific person on the Board?
  - If there was, who was this person? More information needs to get out to the community.
9. Housing needs
  - Ventilation and insulation
10. More exercise programmes
11. Pacific Health centers and Dental clinics with cheap GP and dental services
12. Engaging church and community leaders

### **Samoan group**

1. Oral Health
  - no help or service in WDHB that provides dental services at a low cost
  - the cost of the dentist was very expensive
  - there should be a service for high needs at low cost as in South Auckland
2. Deprivation

- This was a key factor for Pacific people in relation to accessing services and the barriers to accessing services
3. Information
    - Generally need to advertise and promote health services better
    - Information on health services not often promoted well to inform Pacific peoples. For, example oral health services for children (pre-school to high school) - information only promoted at schools but needs to be at community level.
    - Often families are not aware of the free oral health services for children
  4. Cost
    - Pacific people do not go to Health services early because they can be very expensive; people cannot even afford the \$15.
    - Often go to emergency after hours at the hospital because it was free
  5. Quality of Care/Service
    - Generally all felt hospital services were good except for long waiting times
    - Ambulance Services are very expensive which means people are reluctant to call because of cost
    - Felt some Low cost medical centers had poor service. Reasons for this included not having Pacific GPs that understand Pacific patients (i.e. communication not good they don't listen to patient properly) No consistency in what GP was assigned to a patient, so quality of service was poor.
    - Doctors (in both hospitals and GP practices) do not listen to what the patient was saying about what they need or what their concerns are around their symptoms.

### **Tongan group**

1. Care for elderly
  - it was a family's responsibility to care for the elderly but need support
2. Use of traditional healers
  - Needs to be recognised by DHB somehow
3. There was recognition that DM/Obesity/DVD/Physical activity are important issues in the community
  - Need to engage leadership of churches as healthy eating was still seen as a bit of a joke; need leadership to change first
4. Physical Activity

- If want to increase physical activity need to consider who will look after the children
- Need to have sessions more than once per week

### English speaking group

#### 1. Oral Health

- Two-thirds of Pacific mothers have not been to a dentist in years
- Need to increase access by lower cost and increased knowledge of services

#### 2. Men's Health

- Not looking after themselves too busy working don't think about own health
- Leaving it to the last minute before seeking help

#### 3. Obesity

- One in four obese was a major concern

#### 4. Cervical and breast screening

- not enough Pacific specific services especially on the Shore
- Poor understanding of screening pathway

#### 5. Immunisation

- Rates need improving

#### 6. Health promotion

- Need more Pacific people

#### 7. Youth

- Need to make sure they get a good start in life

#### 8. Access to information

- No-one knows who to contact regarding services and about cost/cheap/free services
- Knowing they can ask questions (too afraid, don't want to offend)

#### 9. Unhappy with GP/Hospital service

- Feel not being listened to by doctor
- being rushed out
- Knowing that the patient can ask questions to doctor

- Needs not being considered
- GP bottle necks (e.g. for WINZ letters)

#### 10. Communication Barriers

- Use of medical language
- Need for Cultural competence in workforce

#### 11. Transportation

- Lack of transport was a major barrier to all services

### 12th November (Waitakere City)

#### Written feedback

##### 1. Oral Health

##### 2. Child/youth health

- Youth alcohol and drug services
- Lack of access to GP
- Sexual and mental health

##### 3. Men's and Women's Health

- People with chronic disease too embarrassed to consult doctors about it

##### 4. Older People's health

##### 5. Transport

- No transport as working people have only transport, can't get to clinic until working person home

##### 6. Workforce development

- More training for Pacific nurses and caregivers
- More health workers

##### 7. Health Promotion/education

- Deliver the message through TV, radio and leadership i.e. Rev. of churches
- Be Innovative
- Recognition of early symptoms

##### 8. Mental Health



- Educate more people to deal with people with mental health
- Depression and stress leads to overeating and less physical activity and illness

#### 9. Budgeting

- People need a service to teach how to budget wisely

#### 10. Health Services

- Provide services that are affordable, accessible (local), appropriate (culturally and clinically).
- Services should be designed with Pacific People in mind e.g. later opening ours, transport to clinic.

### Samoan group

#### 1. Mental Health

- Often missing from planning
- Misunderstood
- Implication on physical health (stress and alcohol and drug use)

#### 2. Finance

- Cause of stress, social issues, can not buy healthy foods
- Housing issues and overcrowding
- Low incomes, can not afford to go to doctor
- Time people can not take time off work to go to doctors

#### 3. Education

- Need education in finance/budgeting leads to better lifestyle and health
- Health promotion on how to access services
- Barriers can also be due to pride/losing face

#### 4. Environment

- Includes housing and diet, being in a positive environment

#### 5. Children / Youth

- Parents judged if children go to hospital
- Youth do not access health care services

6. Elderly
  - Better services for our elderly
7. Transport
  - Access to services
8. Men's Health
  - Prostate Cancer
9. Hospital Emergency Services
  - no services in West Auckland
10. Specialist Services
  - Limited in West but need them there
11. Full set of services in West required
12. Knowledge of complaints process
13. Communication within families
  - Need to talk about health issues

#### **Tongan group**

1. Childhood obesity
  - Target Pacific
2. Health knowledge
  - When to see a doctor; when to wait and see?
3. Training
  - Train the community leaders so they can train their followers
  - Train community health workers so they can train the community
4. Issues of Tapu
  - Separate men's and women's issues
5. Discharge of elderly Home
  - Need better on going care at home
6. Disability was a major problem
7. Youth not engaged in the HNA process

8. Men's health

9. Circumcision

- Not funded but an important health need for particular cultural groups

### English speaking group

1. Workforce development

- Need Pacific people to complete course and stay in NZ
- Health sector scholarships
- Mentoring

2. Education for families

- Health promotion needs to target beyond the church
- Sports teams
- Change parents' and other people's attitudes to health education brought home to school by children

3. Men's Health

- Men leave things until too late
- Weekend drinking Culture (rugby culture), healthy eating post rugby days

4. Barriers to health care

- Language, transport, money, afraid, not feeling comfortable with treatment
- Can not just target one area
- Cultural barriers between age groups
- Bring services to the people
- Treated as stupid/looked down on by medical services so don't go back/feel disrespected
- Pride/Mana important to older people
- Need to increase communication by health professionals
- Non-resident costs

5. Health promotion

- Targeting school –messages not getting through; Some Pacific children not participating because of suspension

- Need to target parents to change their attitude to make kids more likely to change behaviour
6. Out reach services by Polynesian people for Polynesian people
    - For example WOW bus
    - Some preference for Palagi services for sensitive issues e.g. family planning, mental health, alcohol and drug issues
  7. Alcohol
    - A big Issue from aged 13 onwards
  8. Medication
    - 50% of people with high blood pressure don't pick up Meds as don't see themselves as unwell
  9. Chronic Diseases major problem
    - People not get treated, dying, dying young, complications
    - If grandmother sick whole family sick
  10. Elderly
    - Often struck at home looking after grand/great-grandchildren
    - Translation helps with access for older people
    - TV and Radio a good way of targeting older people with ethnic specific messages
  11. Health Promotion
    - Important to counter lack of information
    - Need to emphasise the message that you need to live for your kids and grand kids
    - Grass roots approaches with community-train at this level and get those trained to train others
    - Ministers must be asked to challenge cultural norms e.g. kava drinking
    - Tuvaluan Specific health promotion
  12. Mental health Services
    - Need Pacific child, youth and maternal services

## Appendix 2-The Fonofale model of Health

The following was taken directly from the Appendix of the Pacific peoples and mental health paper <http://www.tepou.co.nz/file/pacific-peoples-and-menta-health-may08.pdf> (accessed 25/11/2008 at 11am).

The Fonofale model was created by Fuimaono Karl Pulotu-Endemann as a Pacific Island model of health for use in the New Zealand context. The Fonofale model is named after Fuimaono Karl's maternal grandmother, Fonofale Talauega Pulotu Onofia Tivoli.

A description of the Fonofale model first appeared in 1995 in the Ministry of Health report Strategic Directions for Mental Health Services for Pacific Island People. However, the model's development dated back to 1984, when Fuimaono Karl was teaching nursing and health studies at Manawatu Polytechnic. The model underwent many changes prior to 1995.

The Fonofale model incorporates the values and beliefs that many Samoans, Cook Islanders, Tongans, Niueans, Tokelauans and Fijians had told Fuimaono Karl during workshops relating to HIV/AIDS, sexuality and mental health from the early 1970s to 1995. In particular, these groups all stated that the most important things for them included family, culture and spirituality. The concept of the Samoan fale, or house, was used as a way to incorporate and depict a Pacific way of what was important to the cultural groups as well as what the author considered to be important components of Pacific peoples' health. The Fonofale model incorporates the metaphor of a house, with a roof and foundation.

### The Foundation (Family):

The foundation of the Fonofale represents the family, which is the foundation for all Pacific Island cultures. The family can be a nuclear family as well as an extended family and forms the fundamental basis of Pacific Island social organisation.

### The Roof (Culture):

The roof represents cultural values and beliefs that is the shelter for life. These can include beliefs in traditional methods of healing as well as western methods. Culture is dynamic and therefore constantly evolving and adapting. In New Zealand, culture includes the culture of New Zealand-reared Pacific peoples as well as those Pacific peoples born and reared in their Island homes. In some Pacific families, the culture of that particular family comprises a traditional Pacific Island cultural orientation where its members live and practise the particular Pacific Island cultural identity of that group. Some families may lean towards a Palagi orientation where those particular family members practise the Palagi values and beliefs. Other families may live their lives in a continuum that stretches from a traditional orientation to an adapted Palagi cultural orientation.

These can include beliefs in traditional methods of healing as well as western method.

### The Four Pou:

Between the roof and the foundation are the four pou or posts. These pou not only connect the culture and the family but are also continuous and interactive with each other. The pou are:

Spiritual - this dimension relates to the sense of well being which stems from a belief system that includes either Christianity or traditional spirituality relating to nature, spirits, language, beliefs, ancestors and history, or a combination of both.

Physical - this dimension relates to biological or physical wellbeing. It is the relationship of the body which comprises anatomy and physiology as well as physical or organic and inorganic substances such as food, water, air and medications that can have either positive or negative impacts on the physical wellbeing.

Mental - this dimension relates to the wellbeing or the health of the mind which involves thinking and emotions as well as the behaviours expressed.

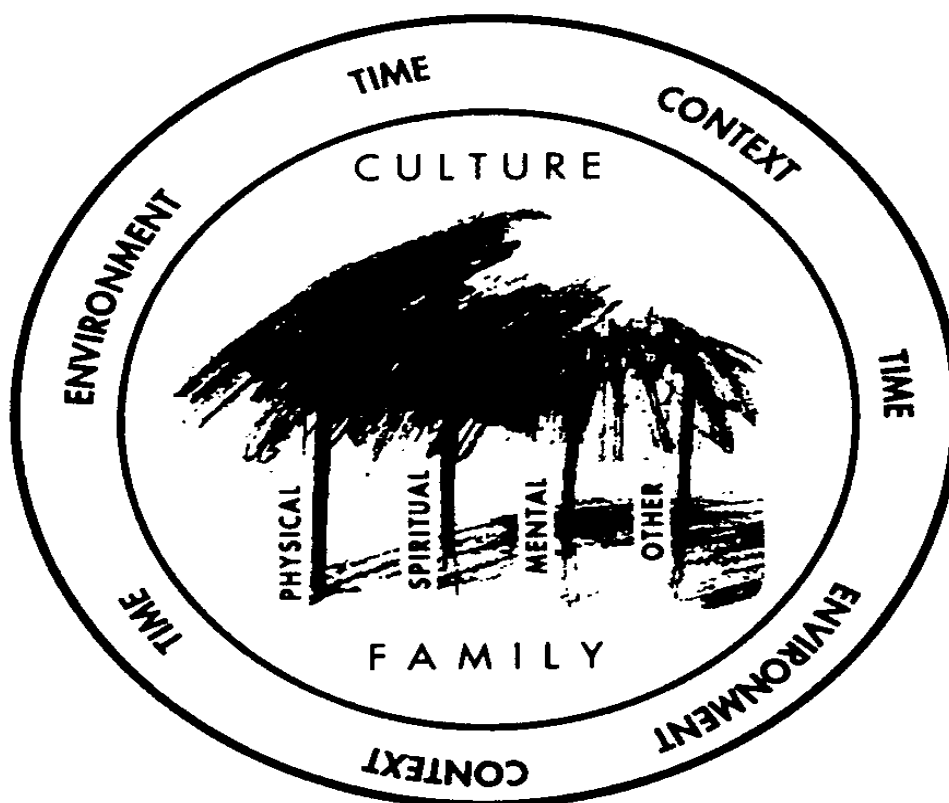
Other - this dimension relates to various variables that can directly or indirectly affect health such as, but not limited to, gender, sexuality, age, socio-economic status.

The Fonofale is encapsulated in a cocoon or circle that contains dimensions that have direct or indirect influence on one another. These are:

Environment - this dimension addresses the relationships and uniqueness of Pacific people to their physical environment. The environment may be rural or an urban setting.

Time - this dimension relates to the actual or specific time in history that impacts on Pacific people.

Context - this dimension relates to the where/how/what and the meaning it has for that particular person or people. The context can be in relation to Pacific Island reared people or New Zealand reared people. Other contexts include politics and socioeconomics.



## Appendix 3-Ethnicity

Ethnicity data were presented in two ways: 'total response' and 'prioritised'. In 'total response', a respondent was counted in each of the ethnic groups they selected. This means that the sum of the ethnic group population will exceed the total population because people can select more than one ethnic group.

### Prioritisation for Level 1 ethnicity

In the 'prioritised' method, each respondent was allocated to a single ethnic group using the priority system. At level 1 the system was Maori first then Pacific peoples, then Asian peoples and finally other peoples. For example a person who selects (when asked their ethnicity) both Maori and European would only be included in the Maori grouping.

### Prioritisation for Level 2 ethnicity

The table below shows priority order of each ethnic group.

Priority order	Ethnic group code (L2)	Ethnic group code description
1	21	Māori
2	35	Tokelauan
3	36	Fijian
4	34	Niuean
5	33	Tongan
6	32	Cook Island Maori
7	31	Samoaan
8	37	Other Pacific Island
9	30	Pacific Island NFD*
10	41	South East Asian
11	43	Indian
12	42	Chinese
13	44	Other Asian
14	40	Asian NFD
15	52	Latin American / Hispanic
16	53	African
17	51	Middle Eastern
18	54	Other
19	12	Other European
20	10	European NFD
21	11	NZ European

Note: NFD = Not Further Defined (see 'Processes for responses not matching existing descriptions' below).

Source: Ministry of Health. 2004. Ethnicity data protocols for health and disability sector. Wellington: Ministry of Health

## Appendix 4-World Health Organization (WHO) world population age weights

Age group	Weight
0–4	8.86
5–9	8.69
10–14	8.6
15–19	8.47
20–24	8.22
25–29	7.93
30–34	7.61
35–39	7.15
40–44	6.59
45–49	6.04
50–54	5.37
55–59	4.55
60–64	3.72
65–69	2.96
70–74	2.21
75–79	1.52
80–84	0.91
85–89	0.44
90–94	0.15
95–99	0.04
100+	0.005
Total	100

Source: Health & Disability Intelligence Unit, Ministry of Health



## Appendix 5-Data and information sources

This section describes the key data sources used in this report. It has been taken from the Overall HNA.

### New Zealand Health Information Service (NZHIS)

The New Zealand Health Information Service (NZHIS) manages a number of databases including the National Minimum Data Set (NMDS), the Mortality Data Collection, National Non-Admitted Patient Data Collection, Cancer Registration and Mental Health Information National Collection. They are essentially a combination of existing public and some private morbidity data collections. All diagnoses are classified according to the International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-AM).

### Hospital morbidity data

Data on the morbidity of various diseases and conditions are primarily based on all discharges from public hospitals. This is also called the NMDS. Day cases are included in this data but attendances at outpatient clinics or emergency departments are not included. Analysis of hospitalisation data focuses on the number of episodes of care rather than the number of individual people. Hospital data include patients who die in hospital after formal admission.

A general issue with using hospitalisation rates for outcome measures was that reductions in such rates can reflect either a real decrease in incidence, improved primary health care (thus reducing the need for hospital care), or a decrease in access to (or provision of) hospital services. The relative importance of these factors was often not known.

### Outpatient data

The National Non-Admitted Patient Data Collection was introduced in July 2006 and provides nationally consistent data on non-admitted patient activity. Information about Waitemata's population's use of outpatient clinics was drawn from this source.

### Mortality data

The mortality statistics maintained by NZHIS are based on death certificates completed by medical practitioners, post-mortem reports, coroners' certificates, and death registration forms completed by funeral directors. Supplementary data are obtained from a variety of other sources (such as public hospitals and the National Cancer Registry). Mortality data for 3 years was used in an attempt to ensure sufficient numbers for analysis.

### Cancer data

The National Cancer Registry (NCR) was established in 1948 and is now maintained by NZHIS. It is a register of people who develop all types of cancer except basal and squamous cell skin cancers. The Cancer Registry Act 1993 requires all pathology laboratories to supply the NCR with a copy of any pathology report with a diagnosis of cancer and related conditions. This data was somewhat older than other NMDS data but was the most recent available.

### Mental Health Information National Collection (MHINC)

The information collected by MHINC relates to the provision of secondary mental health and alcohol and other drug services, which are funded by the government. Providers include DHBs and, to a

limited degree, non-government organisations (NGOs). The collection does not include information on primary mental health services.

### **The 2006/07 New Zealand Health Survey**

This face-to-face survey was completed over a one year period between 2006 and 2007. It had a sample size of 12,488 adults (15 years and older) and 4921 children (0-14 years). Approximately 1200 adults were sampled in Waitemata district. The response rate was 68% for adults and 71% for children.

The survey provides information on:

- Selected health risk behaviours (smoking, physical activity and alcohol use).
- The health status of New Zealanders, including their self reported physical and mental health status, and the prevalence of selected conditions including diabetes.
- The utilisation of health services.
- And a number of demographic characteristics such as age, gender, ethnicity, and income.

Where estimates are provided for Waitemata populations they may be either direct survey estimates or synthetic estimates. Since the sample sizes for the overall Waitemata population was reasonably large direct estimates can be calculated using only the respondents from Waitemata District. However, for ethnic specific estimates, sample sizes were too small so estimates were derived by Health & Disability Intelligence Unit (HDIU), Ministry of Health from a statistical regression model. These estimates were only available for adults.

### **Census and demographic data**

A New Zealand Census of Population and Dwellings is held every five years. Everyone in the country on census night, including visitors to the country, must fill out an individual census form. This census was carried out in March 2006.

The New Zealand Census collects limited health information but contains much social and economic information that was useful in describing the factors that determine health. In addition, the Census forms the basis for determining Waitemata's and New Zealand's denominator populations. Projections of population sizes for the years after 2006 and estimates of population sizes between the 2001 and 2006 Censuses have been made. Projections are made on the basis of assumptions about a number of factors including migration, fertility and mortality. However, projections are not always accurate.

### **Birth registrations**

This includes all live and still births registrations from Births, Deaths, and Marriages.

### **Waitemata DHB Health Needs Assessment (2008)**

Health & Disability Intelligence Unit (HDIU), Ministry of Health was contracted by a number of DHBs, including Waitemata, to undertake Health Needs Assessments on their behalf. The document delivered stands as a HNA on its own. However, Waitemata has used this document as basis for developing our four HNAs of which this HNA is one. As such, a considerable proportion of the analyses and interpretation in this document was based upon HDIU's work. In particular this includes some of the Census analysis, most of the NZ Health Survey work, and a good proportion of the mortality and hospitalisation analyses.

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