August 2012



Health needs assessment of Asian people living in the Auckland region




Disclaimer

This report was commissioned by the Northern DHB Support agency on behalf of the Auckland Regional Settlement Strategy Health Steering group which represents Waitemata, Auckland and Counties Manukau District Health Boards.

Published in August 2012, by the Northern DHB Support Agency (NDSA)

ISBN 978-0-473-21083-0 (Paperback)

ISBN 978-0-473-21084-7 (PDF)

Suggested citation

Mehta S, Health needs assessment of Asian people living in the Auckland region. Auckland: Northern DHB Support Agency, 2012.

Te Poari Tautoko I Nga Rohe Ki Te Raki

Waitemata District Health Board
Te Wai Awhina

Auckland District Health Board
Te Toka Tumai

Counties Manukau District Health Board
A Community Partnership



Foreword

This report was commissioned by the Northern DHB Support Agency on behalf of the Auckland Regional Settlement Strategy Migrant Health Action Plan which represents Waitemata, Auckland and Counties Manukau District Health Boards.

The Health Needs Assessment of Asian people living in the Auckland region report is the most comprehensive review to date of the differences in health status and service access for the diverse Asian communities living in Auckland. The report presents data sourced from both nationally and regionally collected datasets, as well as health service provider interviews which provide additional insights to those offered by the quantitative data. Importantly, the report includes analyses of health issues that have not previously been addressed in detail for Asian communities in Auckland, such as health of older people, family violence, patient safety and disability.

Averaging the health outcomes of the Asian subgroups, through use of 'Asian' as a single ethnic group, has led to the misconception that Asian communities have better health status in most respects compared to other ethnic groups in New Zealand. This report demonstrates that, particularly in relation to chronic diseases, some Asian groups have high health needs and disparities in health service access which appear to be increasing over time. It also appears that mental illness, settlement stress and lack of knowledge of the health system are important issues among Auckland Asian communities.

The Auckland Regional Settlement Strategy Migrant Health Action Plan would like to thank Dr Suneela Mehta for her time in bringing this report to completion. They would also like to thank Dr Geeta Gala and Dr Annette Mortensen for their advice and assistance in undertaking this review. These analyses make a substantial contribution towards understanding the distinct health needs of Asian sub-groups and provide an invaluable resource for current and future planning of health services for Asian populations in Auckland.

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Acknowledgements

The author wishes to sincerely thank:

- Dr Geeta Gala for her guidance, supervision and generosity of time
- Dr Annette Mortensen for her wealth of knowledge and for sponsoring this work.
- The other members of the Regional Steering Group for their time and considered advice (in alphabetical order by first name):
  - Jean-Marie Bush, Planning and Funding, WDHB
  - Laura Patterson, Refugee Health Collaborative Project Manager, ADHB
  - Dr Lifeng Zhou, Planning and Funding, WDHB
  - Dr Mazin Ghafel, Planning and Funding, ADHB
  - Yvonne Wright, Planning and Funding, CMDHB
- Dean Papa for data management work and statistical support
- Ron King, Auckland Regional Public Health Service, for preparing the population density maps
- Professor Shanthi Ameratunga, University of Auckland, for providing feedback on the disability section
- The Auckland health service providers who generously gave of their time and agreed to be interviewed
- Dr Gary Jackson for reviewing the draft report and providing valuable feedback.
- The following people for provision of data and advice (in alphabetical order by first name):
  - Dr Andrew Kerr, CMDHB
  - Barbara Irwin, Ministry of Health
  - Doug Funnell, Ministry of Health
  - Edward Ahn, WDHB
  - Emma Murray, Ministry of Health
  - Emmanuel Jo, Ministry of Health
  - Frank Shi, CMDHB
  - Gavin Knight, New Zealand Police
  - George Sutton, Victim Support
  - Ian McKenzie, NDSA
  - Jo Fink, Ministry of Justice
  - Kathryn Reeves, ADHB
  - Kathy Lowe, ADHB
  - Keming Wang, CMDHB
  - Lesley Wood, Auckland Medical Aid Centre Ltd
  - Louise Dickinson, ADHB
  - Professor Matthew Parsons, University of Auckland
  - Melissa Field, Ministry of Health
  - Mihikore Andrews, Ministry of Health
  - Mildred Lee, CMDHB
  - Dr Michal Boyd
  - Rayoni Keith, Ministry of Health
  - Soledad Labbe-Hubbard, NDSA
  - Stephanie Muncaster, WDHB

Executive Summary

Introduction

The term 'Asian' is used in New Zealand to describe culturally diverse communities with origins from the Asian continent. The Auckland Asian population currently represents 22% of the total population in the Auckland region, and is projected to increase more than 60% by 2026. This health needs assessment was commissioned by the Northern DHB Support Agency on behalf of the Auckland Regional Settlement Strategy Migrant Health Action Plan. The purpose of this report is to identify the health needs, including inequalities in health status, of the main Asian ethnic groups living in the Auckland region. It includes analyses of health issues that have not previously been addressed in relation to Asian communities in Auckland, such as health of older people, family violence, patient safety and disability.

Methods

Health needs were considered separately for Chinese, Indian and Other Asian groups where possible, and were compared to non-Maori/Pacific/Asian people in Auckland, except in areas of health such as CVD and diabetes where Maori and Pacific data were also presented for comparison.

Aspects of health among these Asian communities in Auckland that were examined included population demography, risk and protective factors, overall health outcomes, overall health service utilisation, patient safety, cardiovascular disease, diabetes, cancer, health of older people, family violence, mental health, child health, women's health, surgical interventions and disability.

Quantitative data, drawn from a variety of sources, were analysed for selected health indicators. Where possible, indicators corresponding to health priorities identified in the Northern Region Health Plan were presented. Ethnicity grouping was considered according to standard prioritised ethnicity, and estimated resident population projections were the primary denominator population utilised. Health service provider interviews were also conducted, to better understand the health issues affecting Asian communities in Auckland and the roles of these health service providers.

Summary of Key Quantitative Findings

Demographic Findings

In 2010, around 310,000 Asian people were residing in the Auckland region, comprising 127,000 Chinese, 100,000 Indians, and 84,000 Other Asian people. Asians represent the second largest ethnic group in ADHB, WDHB and across the Auckland region, and the third largest group in CMDHB after European/Other and Pacific peoples.

Chinese, Indian and Other Asian communities all have relatively young populations, with a similar proportion of males and females among Chinese and Indians but greater numbers of women aged 25 years or older among Other Asian people. The majority of Chinese people have no religious affiliation, while around 20% are Christian and over 10% are Buddhist. More than 50% of Auckland Indians are Hindu, and other common religions include Islam, Christianity, and Sikhism. The Other Asian group in Auckland comprises a number of diverse populations, the largest of which are Koreans, Sri Lankans, Filipinos and Japanese. These various communities have widely varied religious affiliations. Auckland suburbs with the greatest density of Chinese people were Auckland Central, Epsom, New Lynn and Dannemora, while large numbers of Other Asian people reside in Browns Bay, Wairau Valley, Auckland Central, and Dannemora. High Indian population density was noted in Auckland Central, Sandringham, Mount Roskill, New Lynn, Otahuhu, Mangere, Papatoetoe, Manukau Central and Dannemora.

Among skilled migrants, there has been a decline over recent years in the number of Chinese migrants and an increase in Indian, South Korean, Filipino and Fijian migrants. China, India and South Korea are the three most common source countries for international students in Auckland.

Key Health Concerns

Health concerns among Asian populations in Auckland include:

- Among Chinese: diabetes prevalence among older men and middle-aged and older women, diabetes in pregnancy, child oral health, cervical screening coverage, cataract extractions and terminations of pregnancy.
- Among Indians: CVD, diabetes (including during pregnancy), child oral health, child asthma, low birth weight deliveries, terminations of pregnancy, cervical screening coverage, family violence, hysterectomies, cataract extractions and total knee joint replacements.
- Among Other Asian populations: stroke and overall CVD hospitalisations, diabetes (including during pregnancy), child oral health, child asthma, cervical screening coverage, terminations of pregnancy and cataract extractions.

Previous analyses of Asian data from the New Zealand Health Survey and Youth '07 have also noted the lower prevalence of fruit/vegetable intake and physical activity among Chinese, Indian and Other Asian adults and youth, and a higher prevalence of adult obesity, as compared to other ethnic groups.

Service Access

Coronary procedures rates, dispensing of pharmacotherapy for CVD, Care Plus (chronic disease management) enrolments and the proportion of diagnosed diabetics receiving annual reviews were appropriately high among Indian people (given the burden of CVD and diabetes in this population) as compared to European/Other people. A similar proportion of Asian and European/Other smokers registered in hospital were also advised to quit smoking. However, low PHO enrolment rates among Chinese across Auckland and all Asian sub-groups in WDHB, as well as low cervical screening coverage across Auckland Asian women were noted compared to corresponding European/Other rates. Asian people in Auckland also have lower rates of access to mental health services, disability support services and aged residential care compared to other ethnic groups.

Indicators with Similar or Better Outcomes compared to European/Others

All three Asian sub-groups in Auckland had similar or better outcomes (which may partly reflect the healthy migrant effect) when compared with European/Others for the following indicators: life expectancy; adult all-cause mortality rates and potentially avoidable mortality rates; cancer mortality and cancer registrations; inpatient falls and pressure sores; recorded elder abuse; many women's health indicators; breast cancer screening; surgical procedures (except for total knee replacements and hysterectomies among Indians and cataract extractions among all three sub-groups) and many child health indicators. Compared to European/Other people, Chinese and Other Asian people also had similar or lower rates for CVD mortality, coronary procedure rates, congestive heart failure hospitalisations, and recorded family violence. CVD hospitalisations as well as rates for diabetes mortality and hospitalisations were also similar or lower among Chinese people (but not Indians or Other Asians) than among their European/Other counterparts.

Abatement of Healthy Migrant Effect

The healthy migrant effect abates over time as acculturation occurs. Crucially, comparison of data from the current HNA with HNAs of Asian health in CMDHB (2008) and WDHB (2009) indicate that this is already occurring. CVD mortality rates are rising among Indians, and the burden of diabetes is increasing in Other Asian communities and, to a lesser extent, among Chinese people in Auckland.

Summary of Findings from the Health Service Provider Interviews

Key health issues noted by the health service providers interviewed included the lack of preventive behaviours such as healthy diet and adequate physical activity, high anecdotal rates of smoking among Asian people (particularly Chinese communities), the high and increasing burden of CVD and diabetes among South Asian people and mental health issues. Care and abuse of older Asian people, sexual health issues particularly around termination of pregnancy among Asian students, family violence, and significant immigration and settlement stress were other issues that were frequently mentioned.

Key cultural differences identified included the hierarchical and collectivistic orientation of many Asian cultures, the importance of religion and the stigmatisation of certain health issues such as mental illness and disability. Many interviewees noted that Asian people in Auckland proactively seek health care for non-stigmatised conditions, use alternative therapies, have very high expectations of health professionals and often have distinct gender roles.

Language and lack of knowledge of the New Zealand health system were barriers to appropriate health care that were mentioned by all health service providers interviewed. Other barriers included cultural differences in assessment and treatment, lack of cultural competency among health professionals, stigma associated with health issues, concerns about lack of confidentiality, transport difficulties and cost issues.

Facilitators to appropriate health care included education about the New Zealand health system, other health-related education, improving the cultural competence of health professionals and services and further development of the Asian workforce. Improved inpatient and community support, Asian-targeted health services, co-ordination and linkage of health services, and obtaining regular health service-related feedback from Asian communities were also felt to be important.

Unmet needs identified by interviewees were:

- More targeted health promotion around preventive behaviours and specific health issues such as CVD and diabetes, and further health education around the structure of the New Zealand health system
- Greater prioritisation of Asian health needs where appropriate, including adequate monitoring of Asian health outcomes
- Improved cultural competence of health services
- Adequate development of the Asian health workforce
- Improved availability and access to mental health services
- Greater co-ordination of disability services and availability of culturally-appropriate respite care
- Increased awareness and early intervention for family violence
- Greater awareness and availability of culturally-appropriate care for older Asian people
- Greater collaboration between health services regarding care for Asian people in Auckland, particularly around evaluation and planning of services
- Improved opportunities for overcoming social isolation among Asian migrants.

Recommendations

On the basis of the quantitative and qualitative data presented in this report, the following actions are recommended:

1. Appropriate recognition of Asian health needs in regional and national health-related policy, planning and monitoring

- Greater recognition of the health needs among Asian people is required. The three Auckland DHBs should consider advocating for the health needs of Asian people to be acknowledged where appropriate in health-related policy, planning, monitoring and reporting at a national level (eg national health targets) and at a regional level (eg Northern Region Health Plan, annual plans and DAPS).
- Regarding monitoring for Asian people in Auckland, the three Auckland DHBs should consider advocating for: data collection for the 'Asian' group at minimum and for Asian ethnic sub-groups where possible (particularly for key health issues such as CVD and diabetes) whenever health data is collected; and consistent use of the ethnic coding by Statistics New Zealand for Asian ethnic groups at national, DHB, PHO and NGO levels.
- The three Auckland DHBs should consider advocating for a review by Statistics New Zealand of whether the 'Indian' ethnic group should be replaced by 'South Asian'.

2. More health promotion, including health-related education

- Further health promotion among Asian communities in Auckland should be considered for:

  - Preventive behaviours such as healthy eating, adequate physical exercise, being smoke-free and cervical screening

  - Specific health issues such as CVD, diabetes, oral health (particularly among children), child asthma, family planning and contraception, as well as health issues associated with stigma in Asian communities such as disability, mental illness, and family violence.

- Asian communities in Auckland require culturally-appropriate written information regarding the structure of the New Zealand health system, including wider dissemination of resources that are already available. Appropriate community sessions and local community media messages should also be considered.
- Education regarding key health needs for Asian communities in Auckland should be considered as part of continuing medical education for general practitioners, nurses and other health professionals.

3. Consider more targeted health services for Asian people

The following targeted services and interventions for Asian communities in Auckland should be considered within current mainstream health service provision:

- Consideration of more Asian-focussed CVD and diabetes nurse practitioners
- Expansion and further development of existing Asian mental health service models currently operating in the Auckland region, including support provided in both DHB-funded and NGO sectors.
- Early intervention for family violence, through provision of information in a community setting about the issue and available services.
- Family planning and contraception advice, including for Asian international students
- More culturally-appropriate disability respite services.
- More culturally-appropriate residential care facilities for older Asian people
- Culturally-appropriate community oral health services, particularly for Asian children.

4. Improve the quality of PHO enrolment data and access to primary care services for Asian people

- The quality of PHO enrolment data needs to be improved, including:

  - The accuracy of ethnicity coding

  - The accuracy of domicile data

  - Re-estimation of PHO enrolment rates for Asian populations in the Auckland region once the next census is conducted and accurate population counts are available.

- Interventions are required to increase PHO enrolment rates for Chinese people across Auckland, and Indian and Other Asian people in WDHB.

5. Reduce cultural and language barriers to appropriate health care for Asian people

- Culturally and linguistically diverse (CALD) cultural competence training and resources are freely available to the health and disability workforce across the Auckland region. These resources need to be used more widely.
- Further expansion of cultural support services for Asian people should be considered as part of health service provision in the Auckland region.
- Allocation of additional resources for development of the Asian health workforce according to the ethnic composition of the populations served should be considered. Targeted health scholarships would be useful to encourage further training of Asian health professionals. More bridging courses would also be desirable, particularly in nursing and allied health, to enable overseas-qualified Asian health professionals to register and participate in the Auckland health workforce. Further recruitment of language-matched carer-support workers is also required for non-English speaking families in the home-based support sector.
- Increased awareness is needed among health service providers, particularly GPs, regarding the benefits of using qualified interpreters.
- Additional funding should be considered for English as a Second Language (ESOL) courses, to increase the number of Asian people attending these courses.

6. Promote greater collaboration between health services for Asian people in the Auckland region

- Raised awareness is required among health service providers of the comprehensive list of Auckland Asian, migrant and refugee services, programmes and initiatives currently available on the CALD website
- Sharing of service delivery models of evaluation and research for Asian population health outcomes between the three DHBs is useful when planning services.

7. Improve social capital among Auckland Asian communities

- Funding to initiate and maintain community support groups for Asian people affected by disability, mental illness, family violence and other key health issues should be considered by Auckland DHBs.
- Increased awareness of charitable organisations that provide support services to Asian people, including Shanti Niwas (for older Asian people) and Umma Trust (for women and children), is required.
- The availability of community centres, libraries, public transport and other public facilities should be publicised more widely among Asian communities in Auckland to encourage utilisation of these facilities and reduce social isolation among migrants.
- Consultation with Asian community leaders and community groups should be sought when evaluating existing health services or planning additional health services.

8. Future research

Future research should include: a repeat health needs assessment of Asian people across the Auckland region in 4-5 years; consultation with Auckland Asian communities regarding health needs and barriers to accessing appropriate health care; further examination of the effects of acculturation on the health of Asian migrants and subsequent generations in Auckland; a comparison of the health profiles of Fijian Indians as compared to other 'Indians' to determine if there are important differences; further analyses around the health of older Asian people as data for Asian ethnic sub-groups becomes available; the prevalence of disability in Auckland Asian communities; and ethnic-specific analyses of falls and pressure sores occurring in residential care, as well as osteoporosis and sun exposure.

Abbreviations

ADHB	Auckland District Health Board
AMAC	Auckland Medical Aid Centre
ARPHS	Auckland Regional Public Health Service
ASR	Age-standardised rate
BSA	Breast Screening Aotearoa
CALD	Culturally and linguistically diverse
CHF	Congestive heart failure
CI	Confidence interval
CMDHB	Counties Manukau District Health Board
CORD	Chronic Obstructive Respiratory Disease
CVD	Cardiovascular disease
DAP	District Annual Plan
DHB	District Health Board
ED	Emergency department
HbA1c	Haemoglobin A1c (a blood test measure of diabetes control)
HNA	Health needs assessment
HSP	Health services provider
ICD	International classification of diseases
IHD	Ischaemic heart disease
IMR	Infant mortality rate
LBW	Low birth weight
LE	Life expectancy
MOH	Ministry of Health
NCSP	National Cervical Screening Programme
NDSA	Northern DHB Support Agency
NIR	National Immunisation Register
NGO	Non-government organisation
NMDS	National Minimum Dataset
NZHS	New Zealand Health Survey
NZDep	New Zealand Deprivation Index
NZRP	New Zealand Residency Programme
PAH	Potentially Avoidable Hospitalisation
PAM	Potentially Avoidable Mortality
PHO	Primary Health Organisation
SNZ	Statistics New Zealand
TFR	Total fertility rate
THJR	Total hip joint replacement
TKNJ	Total knee joint replacement
TOP	Termination of pregnancy
WDHB	Waitemata District Health Board
WHO	World Health Organisation

1. Introduction

1.1 Health Needs Assessment

The New Zealand Public Health and Disability Act 2000 requires that one of the functions of a district health board (DHB) is:

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

Health needs assessments (HNA) enable DHBs to fulfil this requirement. An HNA is defined by the National Institute for Health and Clinical Excellence in the United Kingdom as:

> *" a systematic method for reviewing the health issues facing a population, leading to agreed priorities and resource allocation that will improve health and reduce inequalities"*[1]

1.2 Auckland Region

The three DHBs located in Auckland are: Waitemata DHB (WDHB), Auckland DHB (ADHB) and Counties Manukau DHB (CMDHB).

In this report, the 'Auckland region' and 'Auckland' refers to these three DHBs. Northland DHB data have not been included.

1.3 Auckland Regional Settlement Strategy Migrant Health Action Plan

This health needs assessment was commissioned by the Northern DHB Support Agency on behalf of the Auckland Regional Settlement Strategy (ARSS) Migrant Health Action Plan. Section 1.3.1 provides an overview of ARSS and Section 1.3.2 lists the work currently underway in Auckland as part of the strategy.

1.3.1 Overview of the Strategy

The ARSS Migrant Health Action Plan is a whole of government strategy for improving settlement outcomes, including health outcomes, among Asian, refugee and migrant populations. The Northern Region DHB Support Agency (NDSA) and WDHB, ADHB and CMDHB are partners in the ARSS Migrant Health Action Plan.

The objectives of the ARSS Migrant Health Action plan are to:

- Improve ethnicity data classification systems in the health sector for Asian, refugee and migrant populations
- Review Asian, refugee and migrant health needs assessments in the Auckland region
- Identify disability support service needs for Asian, refugee and migrant communities in the Auckland region
- Prioritise Asian, refugee and migrant health needs in the context of DHB's District Strategic Plans and District Annual Plans
- Develop primary health interpreter and translation services for the Auckland region
- Develop a coordinated intersectoral approach to Asian, refugee and migrant health care management
- Assess health service delivery capacity for Asian, refugee and migrant groups in the Auckland region
- Develop programmes for workforce development related to Asian, refugee and migrant populations in primary and secondary health and disability sectors
- Develop a model of primary mental health care for Asian, refugee and migrant populations
- Develop a chronic care management model of care appropriate to Asian, refugee and migrant populations.

1.3.2 Improving Services for Culturally and Linguistically Diverse populations in Auckland

The implementation phase of the regional programme of work began in August 2008 and is ongoing. The joint work undertaken by Auckland region DHBs as part of the ARSS Migrant Health Action Plan is improving access to primary and secondary health services for CALD populations, including Asian, migrant and refugee patients, by:

- providing interpreting services to all primary care providers in the Auckland region
- providing cultural competence training to Auckland region DHB health workforces, Primary Health Organisations (PHOs), primary care organisations (pharmacies, laboratories, Plunket, family planning etc), home based support services (HBSS), and non-government organisations (NGOs) including Disability Information Advisory Services (DIAS) and mental health NGOs. (A. Mortensen, personal communication, 2012)
- improving monitoring and reporting on Asian, Middle Eastern, Latin American and African population health
- improving access to and the cultural responsiveness of DHB child disability, rehabilitation and respite services
- developing mental health services that are culturally responsive to Asian, migrant and refugee groups
- supporting cardiovascular disease and diabetes prevention initiatives in Asian, South Asian, Middle Eastern, Latin American and African populations
- promoting chronic care management models that are appropriate for Asian, migrant and refugee groups.

1.4 Ethnicity Classification in New Zealand

The New Zealand health and disability sector classifies ethnicity data according to the *Ethnicity Data Protocols for the Health and Disability Sector* formulated by the Ministry of Health.[2] These protocols outline a hierarchical system of classification where ethnic groups are aggregated into progressively broader groups ranging from level one to level four according to geographic origin or cultural similarities. These protocols were revised in 2009 to reflect changes in the ethnicity classification used by Statistics New Zealand.[3]

According to the revised protocols, the level one ethnic groups are: Asian, Maori, Pacific, Middle Eastern/Latin American/African (MELAA), European and Other.

A more detailed description of population groups included in the 'Asian' level one category is given in section 1.5.1.

1.5 'Asian' Populations in New Zealand

1.5.1 Definition of 'Asian'

The level one category 'Asian' refers to people with origins in the Asian continent, from China in the north to Indonesia in the south and from Afghanistan in the west to Japan in the east.[4] This definition of 'Asian' excludes people originating from the Middle East, Central Asia (except Afghanistan) and Asian Russia.

The ethnicity protocols subdivide the level one group 'Asian' into five level two categories: 'Other Asian', 'Chinese', 'Indian', South East Asian' and 'Asian NFD'. Table 1 details the population groups that comprise each of these five categories.

Table 1: Level Two Asian Categories defined by Statistics New Zealand

Level Two Asian Categories				
Other Asian (Code 44)	**Indian (Code 43)**	**Chinese (Code 42)**	**South East Asian (Code 41)**	**Asian NFD* (Code 40)**
Japanese	Indian NFD*	Chinese NFD*	Southeast Asian NFD*	Asian NFD*
Korean	Bengali	Hong Kong Chinese	Filipino	
Afghani	Fijian Indian	Cambodian Chinese	Cambodian	
Sri Lankan NFD*	Gujarati	Malaysian Chinese	Vietnamese	
Sri Lankan Tamil	Tamil	Singaporean Chinese	Burmese	
Sri Lankan NEC*	Punjabi	Vietnamese Chinese	Indonesian	
Sinhalese	Sikh	Taiwanese	Laotian	
Bangladeshi	Anglo Indian	Chinese NEC*	Malay	
Nepalese	Indian NEC*		Thai	
Pakistani			Southeast Asian NEC	
Tibetan			Other SE Asian	
Eurasian				
Asian NEC*				

Source: Statistics New Zealand
* NEC=not elsewhere classified; NFD=not further defined

1.5.2 Applicability of the Term 'Asian'

The definition of 'Asian' detailed in section 1.5.1 has been adopted in New Zealand political and academic circles. However, it differs from the definition used in other countries such as the United Kingdom or the USA. In the United Kingdom, the Office for National Statistics uses 'Asian' to refer to people of South Asian extraction, with Chinese people considered separately.[5] In USA, the term 'Asian' encompasses the same population groups as the official New Zealand definition, but Asian people are often grouped in with Pacific peoples.[6] Colloquially in New Zealand, the term 'Asian' is used to describe people with origins from China or other South East Asian countries. [7, 8]

Use of the level one group 'Asian' in New Zealand is preferable to grouping the Asian populations in with the 'Other' level one category, as it recognises that these Asian communities will have different health and social status and needs. Nevertheless, the inclusion of populations that have very different cultures and health needs under this term 'Asian' is problematic if the health status of Chinese, Indian and Other Asian communities are considered together and 'averaged', particularly for health issues such as cardiovascular disease (CVD) and diabetes. Furthermore, many people classified as being 'Asian' do not identify with the term, which may lead to under-utilisation of 'Asian' targeted services.

1.5.3 'Healthy Migrant' Effect

A 'healthy migrant' effect occurs among first generation immigrants, whereby migrants tend to have better health status than locally-born citizens.[4, 9, 10] Local and international evidence postulates a number of potential explanations for this phenomenon, including health screening of immigrants, self-selection of younger and more highly educated individuals among people considering migration, as well as under-reporting and under-diagnosis of health conditions.[9, 10] This healthy migrant effect, however, does not apply to all migrants and does not encompass all health conditions.[9] A number of New Zealand studies have documented the short-term negative impacts of migration on psychological wellbeing, particularly if migrants are not proficient in English, are unemployed following arrival in New Zealand or have low education levels.[11, 12] The healthy migrant effect also abates over time, with the process of acculturation (ie assimilation of unhealthy behaviours in the host country) and if migrants encounter barriers to accessing health services such as language or lack of cultural competence.[4, 10]

1.5.4 Asian Ethnic Groups Used in this Report

This report stratifies the Asian populations in Auckland into three ethnic groups: 'Chinese', 'Indian' and 'Other Asian'. The latter group includes the 'Other Asian', 'South East Asian' and 'Asian NFD' Level two categories detailed in Table 1. This classification is consistent with other reports that have examined the health profiles of Asian people in New Zealand.

Categorisation of ethnicity according to the groups 'South Asian', 'East Asian' and 'South East Asian' would have resulted in more meaningful comparisons. 'South Asian' includes people originating from India, Sri Lanka, Nepal, Pakistan, Bangladesh, Afghanistan, Bhutan, the Maldives and Fijian Indians. East Asians incorporate people who have migrated from China, Japan, Taiwan, Mongolia, South Korea, North Korea and Macau. South East Asians are generally considered to include people from Vietnam, Cambodia, Malaysia, Singapore, Indonesia, Thailand, Philippines, Burma, Brunei, East Timor, and Laos. However, health and disability data is generally not available at level 3 or level 4 ethnic groupings to enable the South Asian and East Asian categorisation, and although some data is available for South East Asians, the numbers are generally too small to enable reliable estimates of health outcomes.

1.6 Brief Overview of Literature

1.6.1 New Zealand Literature

A number of reports of quantitative data have been undertaken in recent years to investigate Asian health in Auckland and across New Zealand. These include:

- Asian Public Health Project Report 2003[13]
- Mental Health Issues for Asians in New Zealand: A Literature Review[14]
- Asian Health in Aotearoa: An Analysis of the 2002-2003 New Zealand Health Survey[15]
- Asian Health in Aotearoa in 2006-2007. Trends since 2002-2003.[16]
- A Health Profile of Young Asian New Zealanders: Findings from Youth 2000[17]
- Youth 07. The Health and Wellbeing of Secondary School Students in New Zealand[18]
- Asian Health Chart Book 2006[4]
- Health Needs Assessment for Asian People in Counties Manukau[19]
- Health Needs Assessment for Asian People in Waitemata[20]

The major demographic characteristics of Chinese, Indian and Other Asian communities in New Zealand identified across these reports were the relatively young age distribution, high overall education levels and lower income levels as compared to all New Zealanders together. A relatively even distribution across the deprivation deciles apart from slight under-representation of Indians in the most and least deprived areas was also noted, along with an increasing average duration of residence in New Zealand over time (indicating that the Asian populations are becoming more established in New Zealand). The major health issues identified across these reports were:, CVD, type 2 diabetes, increasing prevalence of obesity and low birth weight among Indian people; low utilisation of primary care services by Chinese people; and underuse of contraception particularly among Chinese and Indian youth. Across Chinese, Indian and Other Asian communities, there was a lower-than-average self-reported intake of fruit and vegetables and levels of physical activity, lower utilisation of preventive services such as cervical screening and dental visits, and significant mental health issues. When Asian sub-group populations were compared with the New Zealand average, they were found to have better life expectancy, lower-than-average adult potentially avoidable mortality rates, lower overall infant mortality, similar breast screening rates, and better immunisation coverage.

Issues that were not examined in detail in these predominantly quantitative reports include health of older Asian people, family violence, disability and patient safety. However, a number of qualitative studies have explored the first three of these domains. One study published in 2010 by the Institute of Policy Studies investigated the interaction of families, aging and migration among Indian communities in Auckland, Wellington and Christchurch. Interviews with 28 key informants and families indicated that many older Indians living alone or with family members experience social isolation, which may be compounded by language difficulties. Multi-generational living arrangements involving care of older relatives can also exert significant stress on family relationships, as there is a cultural expectation that families would manage this care within the home environment.[21] Family violence within Asian, refugee and migrant populations in Auckland was considered in another study that conducted focus groups and semis-structured key informant interviews with a range of stakeholders from central and local

government and from community organisations[22]. Family violence risk factors that were identified included dependence on an abusive partner to support immigration applications, social isolation, lack of familiarity with local culture and language and the dominant position of men in some traditional cultures. Community initiatives to address family violence in these communities included reducing isolation through social networking, education about family violence and available services, and providing a safe haven for victims.[22] Finally, an evaluation of child disability services for culturally and linguistically diverse (CALD) families in WDHB isolated a number of barriers experienced by families when accessing health and disability support services. Key issues included lack of knowledge about available support and how to access services, ad hoc provision of disability services, and poor communication by services with families. CALD cultural caseworkers assisted families to overcome many of these barriers.[23]

1.6.2 International Literature

The international literature highlights significant concerns about cardiovascular disease and diabetes among South Asian populations. In the United Kingdom, South Asians have 40-50% higher mortality rates from CVD and a tendency towards earlier manifestation of disease compared to the European population.[24-26] Similarly, South Asian people in the UK have a 4 to 6 fold higher risk of developing type 2 diabetes compared to the white indigenous population,[24, 25] and are more likely to have a sedentary lifestyle and to be overweight. The increased risk of CVD, diabetes and sub-optimal lifestyle practices among South Asians have also been noted in other countries, including the USA, Canada, South Africa, the Caribbean, and urban India.[27, 28]

In the USA, a significant proportion of Chinese people do not access adequate health care. Specific health concerns that affect Chinese populations in the USA include depression, alcoholism, hepatitis B and tuberculosis. Older Chinese-Americans also have the highest rates of liver and nasopharyngeal cancers of all ethnic groups in the US, and rates of CVD and diabetes are increasing.[29]

Mental health issues are also a major concern among Asian populations worldwide. One cross-sectional survey conducted in the USA of 447 Cambodian, Vietnamese, and Laotian refugees found that 40% of participants suffered from depression, 14% from anxiety and 14% experienced post traumatic symptoms. Another review found that emotional, behavioural and other mental health issues were common among Asian Americans. However, mental health conditions were frequently misdiagnosed among the Asian population in the USA, and mental health services were generally under-utilised except those services that were culturally and linguistically appropriate.[30]

Domestic violence also affects a considerable number of Asian immigrant families internationally, including Chinese, South Asian and Korean communities in the USA and the United Kingdom. However, the issue is heavily stigmatised and therefore under-reported. [31-33]

Vitamin D deficiency and osteoporosis are other common health issues affecting Asian people[34-36] including immigrants to New Zealand.[37, 38] Among 5,137 apparently healthy school children aged 10 to 18 years from New Delhi (India), low vitamin D levels were noted in 35% of children, with significantly lower levels noted among girls as compared to boys, and low bone mineral density evident among 11% of participants.[39] Another study published in 2004 found that of around 200,000 American women, Asian women had the lowest bone mineral density of all the ethnic groups examined.[40]

1.7 Equity of Health Status and Access to Health Care

Every New Zealander has the right to equitable health status and access to health care. Article Three of the Treaty of Waitangi affirms the equal citizenship rights of Maori, Pakeha and all New Zealanders, including people of Asian descent.[41] This concept is also embedded in the New Zealand Health Strategy, which identifies seven fundamental principles that should be reflected across the health sector including the good health and wellbeing of all New Zealanders throughout their lives, and timely and equitable access for all New Zealanders to a range of health and disability services, irrespective of ability to pay.[42]

The notions of equity of health status and health service access for migrant populations are also reflected in the Auckland Regional Settlement Strategy (ARSS), which was approved by the Cabinet Policy Committee and the Department of the Prime Minister and Cabinet in November 2006. Goal 4 of the ARSS is to 'enhance physical and mental health outcomes', and states that 'health care services should ensure that they are accessible and responsive to the health needs of migrants and refugees, and do not create health inequalities'. (A. Mortensen, personal communication, 2012).

2. Aims and Objectives

The aim of this report was to identify the health needs of Asian communities living across the Auckland region.

The objectives were:

- To describe the demography of the Asian populations in Auckland
- To compare, where possible, the health needs of Asian communities in each of the three district health boards located in the Auckland region
- To identify inequalities in health outcomes and health service utilisation between Asian communities, European/Other people and, where appropriate, Maori and Pacific people.
- To examine areas of health needs such as health of older people, disability, family violence and patient safety that have not previously been explored in detail among Asian populations in Auckland
- To identify priority areas for regional policy and planning around health services and interventions for Asian communities in Auckland
- To highlight potential areas for future research.

3. Methodology

3.1 Selection of Indicators

The indicators included in this report were selected based on common indicators presented in other health needs assessments and survey analyses, on health priorities outlined in the Regional Health Plan for the Auckland and Northland regions, and data availability.

3.2 Data sources

Table 2 summarises the data sources for this health needs assessment.

Table 2: Summary of Data Sources

Data Owner	Data Used	Year(s) of Data Used
ADHB	Get Checked Diabetes data	July 2010-June2011
	InterRAI data for health of older people	2011
Auckland Medical Aid Centre	Privately-funded terminations of pregnancy	2010
Auckland Regional Dental Service	Child oral health data	2011
Department of Labour	Nationality of Skilled Migrants	July 2004-July 2011
CMDHB	Get Checked Diabetes data	July 2010-June2011
Child, Youth and Family	Child abuse data	July 2007-June 2010
Epsom Day Unit	Publically-funded terminations of pregnancy	2010
Ministry of Justice	Convictions for family violence-related assault	2010
Ministry of Health, Wellington	Mortality Collection Dataset	2006-2008
	National Minimum Dataset (NMDS) for hospitalisation data	2008-2010
	Programme for the Integration of Mental Health (PRIMHD)	July 2008 –June 2011
	National Health Targets - quit smoking data	July 2010-June 2011
	PHO enrolment data mart	2010
	New Zealand Cancer Registry	2006-2008
	Taikura Trust disability support services access	July 2010-June2011
	Diabetes prevalence data	2010
Older Persons' Ability Level Census	Health of Older Auckland people data	1998-2008
New Zealand Police	Reports of family violence and elder abuse	2010
Statistics New Zealand, Wellington	Census of Population and Dwellings	2006
	Births data from Births, Deaths and Marriages Register for total fertility rate	2009
National Immunisation Register	Immunisation coverage	2010
National Screening Unit, Ministry of Health	Breast Screening Aotearoa data	2009-2010
	National Cervical Screening Programme data	2008-2010
New Zealand Household Disability Survey	Prevalence of disability in New Zealand	2006
New Zealand Tobacco Survey	Prevalence of current smokers in New Zealand	2009
Northern DHB Support Agency	CVD Medication dispensing data	July 2010-June 2011
Victim Support	Family-violence related victim support service access	2010
Women's Refuge	Access to services by women and children	July2008-June 2011

Health conditions were coded according to the International Classification of Diseases tenth revision (ICD-10-AM). For the codes used please refer to Appendix 2.

3.3 Statistical Methods

3.3.1 Ethnicity Data

Ethnicity data can be categorised in multiple ways.

Categorisation of ethnicity according to 'Total response' counts a person in every ethnic group that they have selected. The sum of each ethnic group population count according to total response ethnicity will therefore exceed the total population count because people can be included in more than one ethnic group.

Standard prioritised ethnicity is most commonly used in the health sector and involves assignment of individuals to a single ethnic group based on the following order of prioritisation: Maori>Pacific>Asian>MELAA>Other groups excluding New Zealand European> New Zealand European. For this method of ethnicity classification, the sum of each ethnic group will add up to the total population count.

Custom prioritised ethnicity is derived using a similar method to standard prioritised ethnicity, but using a customised order of prioritising respondents to ethnic groups. For example, the standard order of prioritisation could be altered such that people identifying with Asian ethnic sub-groups are prioritised ahead of all other ethnic groups.

Standard prioritised ethnicity was used in this health needs assessment unless otherwise stated.

3.3.2 Denominator Population

The estimated resident population is a count of all the people who usually live in a defined region at a specific time. This population incorporates the 2006 census night population count, residents who were away overseas at the time of the census and an adjustment for net census undercount, but does not count visitors to New Zealand (including international students). Further adjustments are made for births, deaths and net migration during the period between the 2006 census night and the date of the projections.[43] Estimated resident population counts, for the same years as those of the numerator data, were utilised as the main denominator population for the quantitative analyses presented.

3.3.3 Estimation of Rates

Rates were presented per 100,000 people unless otherwise stated.

Where possible, rates were age-standardised according to the World Health Organisation's World Standard population age-weights. However, data for some indictors could not be age-standardised and instead were presented as unadjusted or 'crude' rates. Comparisons between crude rates for ethnic groups with different age structures should be interpreted cautiously. The title of each table and graph states whether the presented data have been age-standardised.

Confidence intervals provide an indication of the reliability of an estimate of a population parameter. In this report, 95% confidence intervals were provided for most indicators. When the confidence intervals for two rates did not overlap, then the difference between those rates was considered to be significant.

3.4 Data Presentation

Data were presented for 'Chinese', 'Indian' and 'Other Asian' groups, and compared to non-Maori/Pacific/Asian people in Auckland, except in areas of health such as CVD and diabetes where Maori and Pacific data were also presented for comparison. Aggregated data for the 'Asian' group according to Level one ethnicity classification were only presented when more detailed data for the Asian ethnic sub-groups were unavailable.

Most data were aggregated for a three year period to increase the statistical power and reliability of the ethnic comparisons: hospitalisation data were generally presented for the years 2008-2010, and mortality data were usually presented for the years 2006-2008.

Adults were considered to be anyone aged 15 years or over, children were defined as anyone aged 0 to 14 years inclusive and infants were defined as anyone up to one year of age. Data for selected indicators were stratified by age and sex, or presented for restricted age-ranges (eg 15-74 years) where considered appropriate.

DHB-specific data is provided according to DHB of domicile.

3.5 Health Service Provider Interviews

Interviews with a selection of health service providers from across Auckland were undertaken to better understand both the health issues affecting Asian communities in Auckland and the roles of these providers.

A limited number of interviews with health service providers from different disciplines, ethnic backgrounds, and locations across Auckland were conducted. A list of twelve potential interviewees was drawn up based on recommendations from members of the Regional Steering Group for this health needs assessment. All twelve people consented to be interviewed when approached. Semi-structured interviews of between 25 to 90 minutes duration, and based around a set of prompter questions, were conducted at the offices of each of the health service providers by the author of this report. (Please refer to Appendix 3 for lists of interviewees and prompter questions used). Interviews were taped, transcribed by a professional transcription service, and were analysed according to general inductive methodology to isolate key themes. Data collection and analysis were undertaken concurrently; analysis commenced following the first interview and emerging themes were categorised by iterative readings of the interview transcripts.

3.6 Strengths and Limitations

This report represents the most comprehensive review to date of the health needs of Asian people living in the Auckland region, and included interviews with a range of health service providers, which offered additional insights to those provided by the quantitative data. It includes analyses of health issues that have not previously been addressed in detail for Asian communities in Auckland, such as health of older people, family violence, patient safety and disability.

However, there were a number of limitations of these analyses:

- Estimated resident counts based on projections from the 2006 estimated resident population with standard prioritised ethnicity classification were used as the main denominator population for the quantitative analyses. Although this was felt to be the most appropriate population to use for this health needs assessment, there will be some degree of error in the projections since they are based on population counts from the previous census that was undertaken six years ago.
- Ethnic groups were classified primarily according to standard prioritised ethnicity in these analyses to avoid the issue of 'double-counting' individuals, and because a greater proportion of the quantitative data was available using this categorisation as compared to total response ethnicity. However, use of standard prioritised ethnicity means that people may not be counted in each of the ethnic groups that they identify with.
- Quantitative data for the 'Other Asian' group, which comprises small and culturally distinct communities, will overlook the specific health needs of each of these populations.
- Analyses of quantitative data for South Asians in Auckland, rather than 'Indians', were not possible due to the current limitations in ethnicity coding.
- Misclassification of Fijian Indians as Pacific peoples is known to occur in nationally collected datasets such as NMDS and the mortality collection, and is estimated to affect up to 10% of the total Indian population across the Auckland region. (D Papa, personal communication, 2012).
- Duration of residence in New Zealand, and therefore the effects of acculturation, were not considered in the quantitative analyses.
- Where appropriate, 95% confidence intervals were presented throughout the report, but further statistical analyses such as t tests have not been employed.
- Given the diversity in languages and cultural practices among Asian communities in Auckland, the Regional Steering Group felt that it was beyond the scope of this work to consult directly with Asian communities in Auckland. Instead, it is recommended that this consultation should be undertaken as a stand-alone project in future.

4. Population Demography

This section presents the following demographic data for Asian peoples from across Auckland:

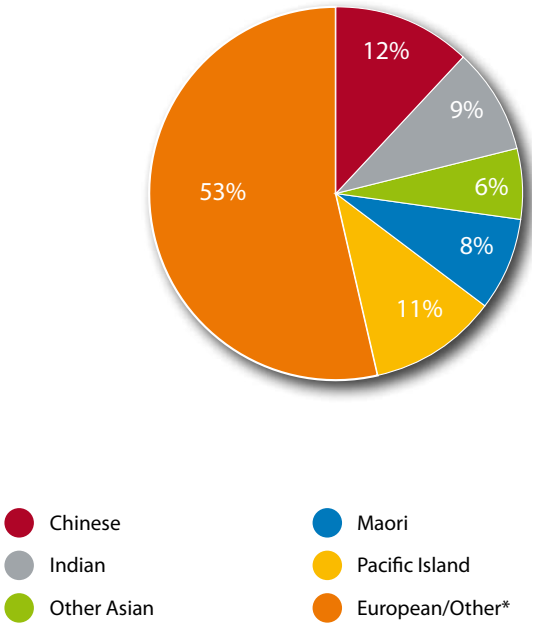
- Ethnic composition of Auckland
- Population size
- Population age and sex structure
- Population density
- Religious affiliation
- Source country of migrants to Auckland.

The census-based demographic data available in New Zealand is relatively outdated, given the cancellation of the census scheduled for 2011. Demographic data from the 2006 Census regarding indicators such as deprivation, income and education have not been included in this report, as these data for WDHB and CMDHB have already been presented in previous HNAs. Section 4 primarily presents demographic data based on current estimated resident population projections, but also presents data from other sources where relevant.

4.1 Ethnic Composition of Auckland

Asian communities comprise a notable proportion of Auckland's population. Figure 1, Figure 2 and Figure 3 present the ethnic composition of each DHB and Figure 4 presents the ethnic breakdown of the Auckland region according to the 2010 estimated resident population approximations.

Figure 1: Composition of ethnicities in ADHB according to prioritised ethnicity, 2010 estimated resident population



Source: Statistics New Zealand and CMDHB, standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 2: Composition of ethnicities in CMDHB according to prioritised ethnicity, 2010 estimated resident population

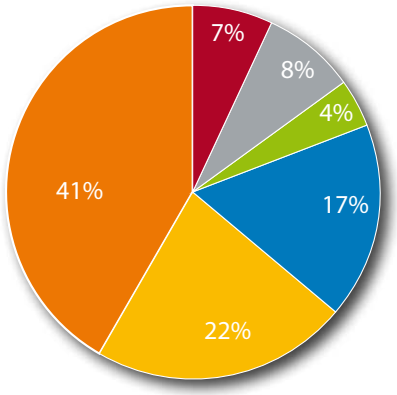


Figure 3: Composition of ethnicities in WDHB according to prioritised ethnicity, 2010 estimated resident population

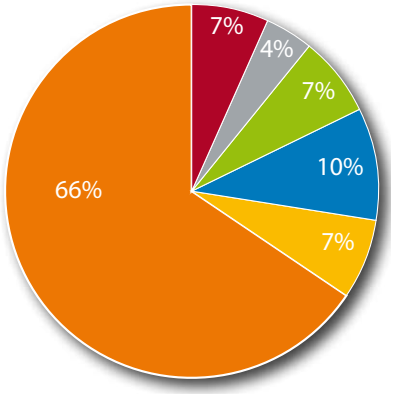
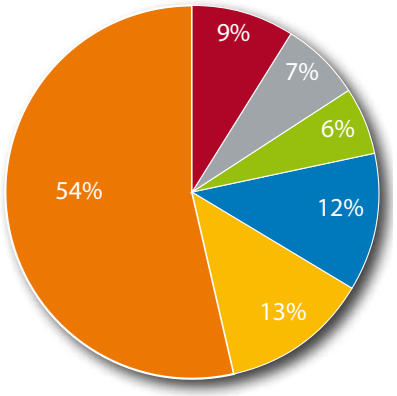


Figure 4: Composition of ethnicities in the Auckland region according to prioritised ethnicity, 2010 estimated resident population



Of the three DHBs, ADHB has the largest Asian population, with an estimated 27% of people identifying as being Chinese, Indian or Other Asian. Across the Auckland region, an estimated 9% of people identified as being Chinese, 7% as being Indian and 6% as being Other Asian in 2010.

4.2 Population Size

4.2.1 Comparison of Population Size using Different Populations and Definitions of Ethnicity

Estimates of ethnic population numbers are influenced by the parameters used to define those populations. Table 3 presents a comparison of estimated counts in 2010 across different populations.

The first of these is the 2010 estimated resident population. This population is derived, based on adjustments for annual population growth, from the 2006 estimated resident population which incorporates the census usually resident population, residents who were away overseas at the time of the census and an adjustment for net census undercount, but does not count visitors to New Zealand.[43] Although the 2006 estimated resident population is relatively comprehensive, the estimated resident populations for subsequent years are likely to be increasingly inaccurate as greater time elapses since the last census.

The second population is based on actual counts of people enrolled in PHOs across Auckland. However, this population will undercount the true population residing in Auckland as PHO enrolment is not comprehensive across communities. Low PHO enrolment rates are a particular issue for Chinese people in Auckland. PHO enrolment rates, and data quality issues, are discussed in greater detail in section 6.1.1.

The third dataset is the 2010 health contact dataset which is constructed by linking multiple sources of health utilisation data including PHO enrolment, National Minimum Dataset, laboratory testing, pharmaceutical utilisation, and the National Non-admitted Patient Collection. While this population is more comprehensive than the PHO enrolment population, the health contact population will still miss those individuals who have not utilised health services over preceding years, including a disproportionate number of marginalised members of society who arguably have high health needs. The health contact population may also miss a number of New Zealanders who spend a significant proportion of their time overseas, as many of their health contacts may consequently occur internationally.

Population estimates for the three DHBs and across Auckland were also considered according to a total response definition of ethnicity, the standard prioritised ethnicity classification and a custom prioritised method of defining ethnic groups. The custom prioritised method modified the order of ethnic group prioritisation set out by the Ministry of Health, such that anyone identifying as Indian, Chinese, South East Asian, Other Asian, and Asian NFD respectively were prioritised to these groups ahead of other ethnicities. The difference between estimated resident population approximations based on total response and those based on standard prioritised ethnicity were small. Likewise, a comparison of standard prioritised ethnicity and custom prioritised ethnicity definitions in the 2010 health contact population showed only small differences, most notably among the Indian and Pacific groups which is likely to reflect misclassification of Fijian Indians as Pacific peoples when standard prioritised ethnicity is used.

Table 3: Comparison of population counts using 2010 estimated resident, PHO enrolment and health contact populations and total response, standard prioritised and custom-prioritised ethnicity.

DHB	Ethnicity	Estimated Resident Total Response	Estimated Resident Standard Prioritised	PHO Quarter 1 Standard Prioritised	Health Contact Standard Prioritised	Health Contact Custom Prioritised
ADHB	Chinese	Unavailable	55,935	40,856	39, 729	40,119
	Indian	Unavailable	40,190	34,864	36,715	38,695
	Other Asian	Unavailable	27,940	28,994	28,100	28,240
	Total Asian	**126,500**	**124,065**	**104,714**	**104,544**	**107,054**
	Maori	36,190	36,190	26,296	33,622	33,258
	Pacific	Unavailable	51,750	65,831	62,930	60,784
	European/Other*	Unavailable	239,120	267,037	247,275	247,275
CMDHB	Chinese	Unavailable	35,945	22,727	26,511	27,042
	Indian	Unavailable	40,015	37,741	36,745	42,036
	Other Asian	Unavailable	20,960	21,826	22,749	22,940
	Total Asian	**100,580**	**96,920**	**82,294**	**86,005**	**92,018**
	Maori	82,370	82,370	70,380	81,478	80,960
	Pacific	Unavailable	108,250	118,870	126,684	121,189
	European/Other*	Unavailable	202,800	210,152	208,384	208,384
WDHB	Chinese	Unavailable	35,575	16,080	25,258	25,663
	Indian	Unavailable	20,145	10,439	18,048	19,481
	Other Asian	Unavailable	35,165	25,650	32,723	32,956
	Total Asian	**92,580**	**90,885**	**52,169**	**76,029**	**78,100**
	Maori	52,830	52,830	36,632	48,573	48,167
	Pacific	Unavailable	38,080	30,400	42,360	40,695
	European/Other*	Unavailable	355,770	337,517	361,454	361,454
Auckland region	Chinese	Unavailable	127,455	79,663	91,498	92,824
	Indian	Unavailable	100,350	83,044	91,508	100,212
	Other Asian	Unavailable	84,044	76,470	83,572	84,136
	Total Asian	**319,660**	**311,870**	**239,177**	**266,578**	**277,172**
	Maori	171,390	171,390	133,308	163,673	162,385
	Pacific	Unavailable	198,080	215,101	231,974	222,668
	European/Other*	Unavailable	797,690	814,706	817,113	817,113

Source: Statistics New Zealand, PHO datamart and CMDHB.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

4.2.2 Population Projections

Table 4 shows the expected growth of all populations in the Auckland region based on current immigration trends. The populations of Chinese, Indian and Other Asian peoples across Auckland are expected to increase more than 60% by 2026. However, future changes to immigration policy, as well as the economic climate and job availability could significantly influence population counts for Asian communities in Auckland.

Table 4: Projected population counts by prioritised ethnicity from 2006 to 2026

DHB	Ethnicity	Year				% change from 2010 to 2026
		2010	2016	2021	2026	
ADHB	Chinese	55,935	66,440	76,400	86,915	+55%
	Indian	40,190	50,175	58,045	65,155	+62%
	Other Asian	27,940	33,810	38,670	43,210	+55%
	European/Other*	239,120	249,660	258,560	267,640	+12%
CMDHB	Chinese	35,945	45,845	54,715	63,860	+78%
	Indian	40,015	50,720	59,375	67,555	+69%
	Other Asian	20,960	25,975	30,480	34,935	+67%
	European/Other*	202,800	204,660	204,810	204,870	+1%
WDHB	Chinese	35,575	44,965	53,230	61,715	+73%
	Indian	20,145	25,810	30,280	34,475	+71%
	Other Asian	35,165	43,790	51,485	59,240	+68%
	European/Other*	355,770	370,290	379,520	387,990	+10%
Auckland region	Chinese	127,455	157,250	184,345	212,490	+67%
	Indian	100,350	126,705	147,700	167,185	+67%
	Other Asian	84,065	103,575	120,635	137,385	+63%
	European/Other*	797,690	824,610	842,890	860,500	+8%

Source: Statistics New Zealand, PHO datamart and CMDHB.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

4.2.3 Level 3 Asian Ethnic Groups

Table 5 presents Census 2006 usual resident counts of Auckland Asian communities using Level three groupings and a total response definition of ethnicity. Chinese and Indian populations are the largest Asian communities in Auckland. Among other Asian groups in Auckland, Koreans have the largest population. The 'Other' group included in Table 5 includes people with origins from Afghanistan, Bangladesh, Nepal, Pakistan and Tibet.

Table 5: Level 3 Asian ethnic group population numbers using total response ethnicity, census 2006 usual resident counts

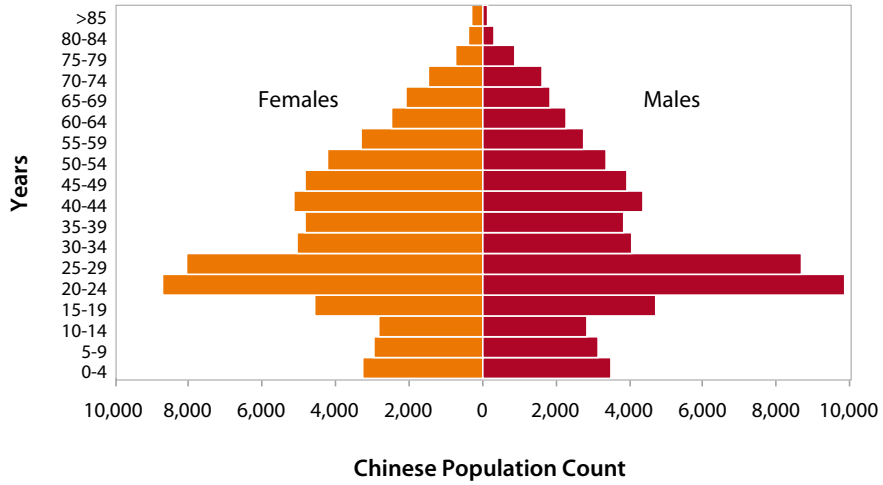
Level 3 Asian Ethnic Groups	DHB			
	ADHB	CMDHB	WDHB	Auckland region
Chinese	43,128	28,092	27,327	98,547
Indian	29,901	29,733	15,018	74,652
Filipino	2,376	2,529	4,941	9,846
Cambodian	447	2,115	813	3,375
Vietnamese	927	1,983	267	3,177
Other Southeast Asian	3,291	1,905	3,717	8,913
Sri Lankan	3,252	936	870	5,058
Japanese	2,781	693	1,830	5,304
Korean	4,785	4,422	12,207	21,414
Other	3,417	1,353	1,941	6,711
Total Asian	**93,519**	**73,053**	**68,148**	**234,720**

Source: Statistics New Zealand, total response ethnicity

4.3 Population Age and Sex Structure

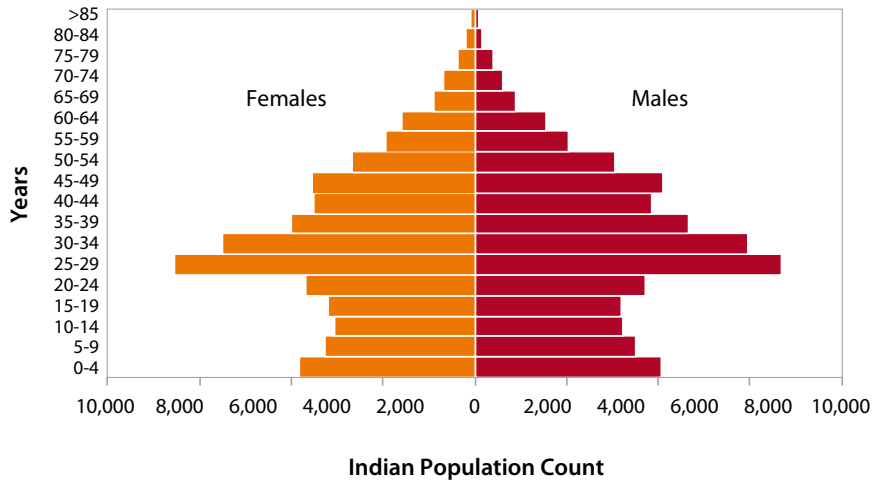
The age and sex structure of the Chinese, Indian and Other Asian populations across Auckland are shown in Figure 5, Figure 6, and Figure 7.

Figure 5: Population age pyramid for Chinese males and females across the Auckland region, 2010



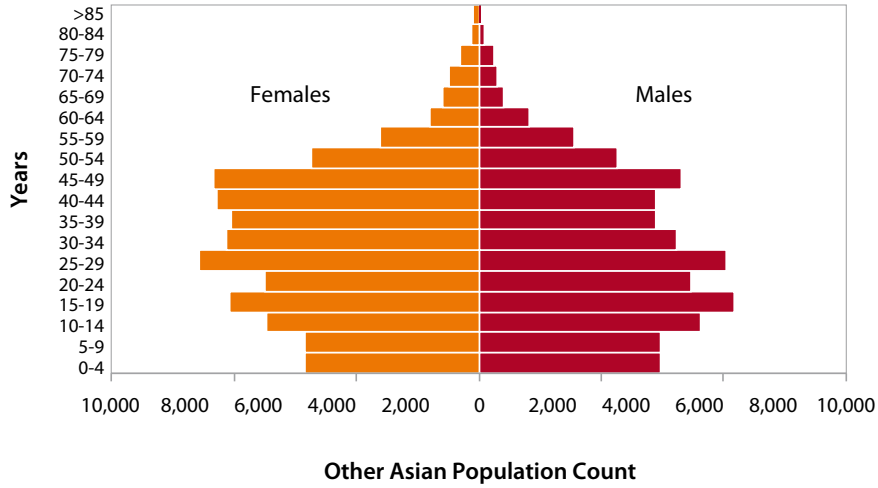
Source: Statistics New Zealand, standard prioritised ethnicity

Figure 6: Population age pyramid for Indian males and females across the Auckland region, 2010



Source: Statistics New Zealand, standard prioritised ethnicity

Figure 7: Population age pyramid for Other Asian males and females across the Auckland region, 2010



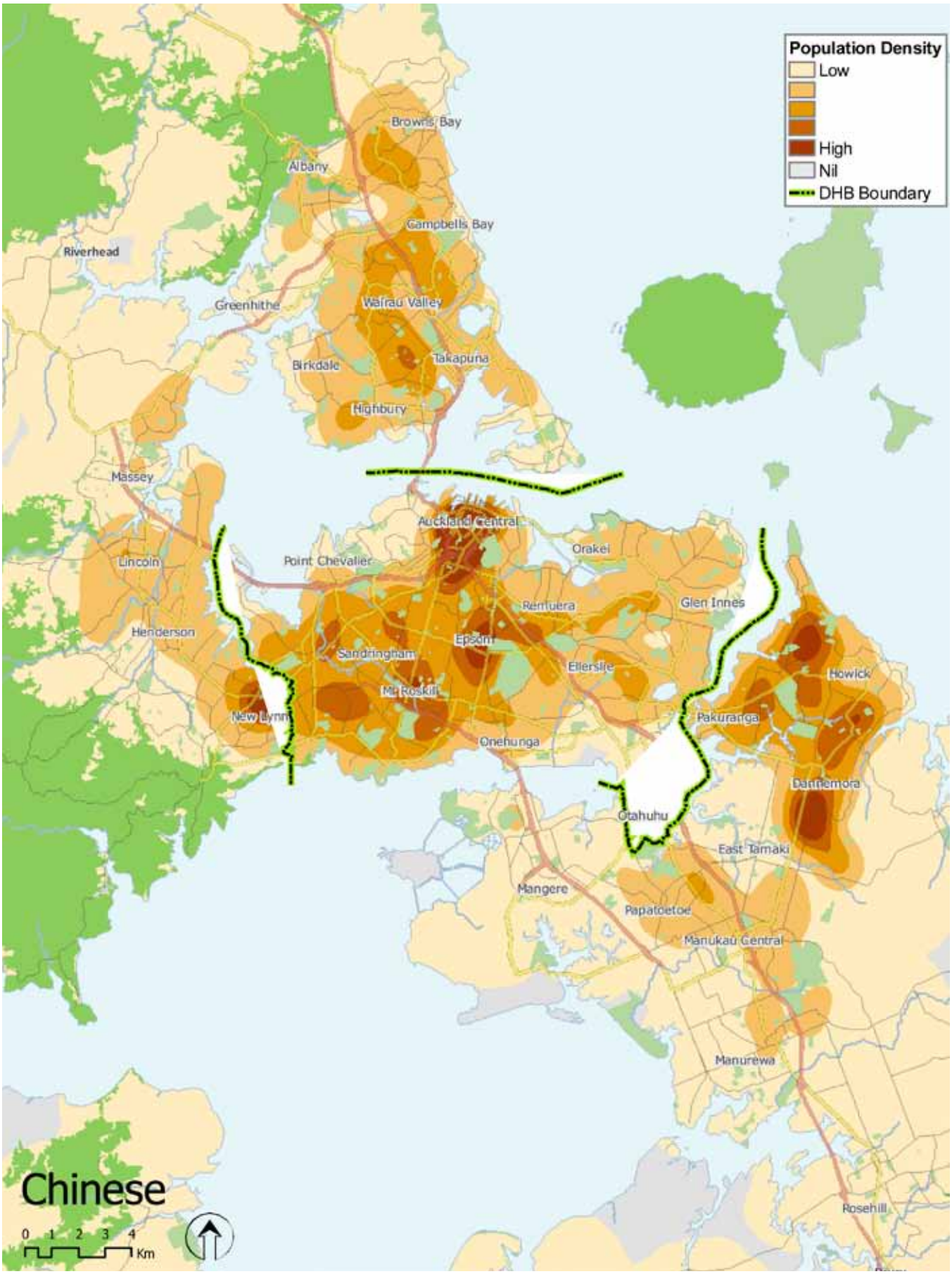
Source: Statistics New Zealand, standard prioritised ethnicity

Chinese, Indian and Other Asian groups in Auckland are relatively young populations. Chinese have a significant number of people aged 20-29 years and large numbers of people aged 25-34 years are evident among the Indian population, probably reflecting student and migrant groups. This spike among people aged 20-34 years is less evident among Other Asians. The proportion of males and females is relatively similar among Chinese and Indians, but the Other Asian population has greater numbers of women aged 25 years or older.

4.4 Asian Population Density in the Auckland region

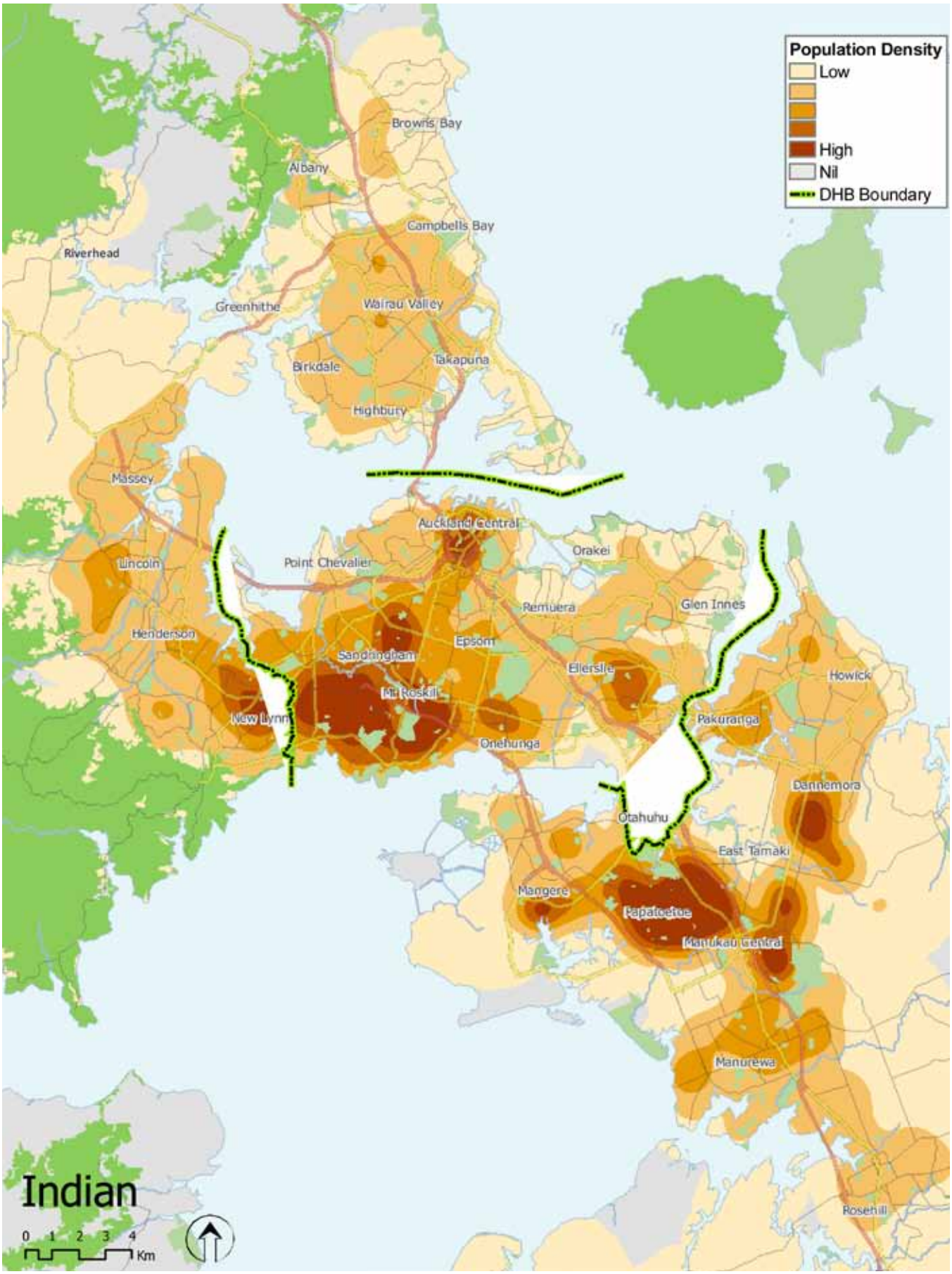
Figure 8, Figure 9 and Figure 10 show the population densities of the Chinese, Indian and Other Asian groups across Auckland.

Figure 8: Chinese Population Density in the Auckland region, 2011



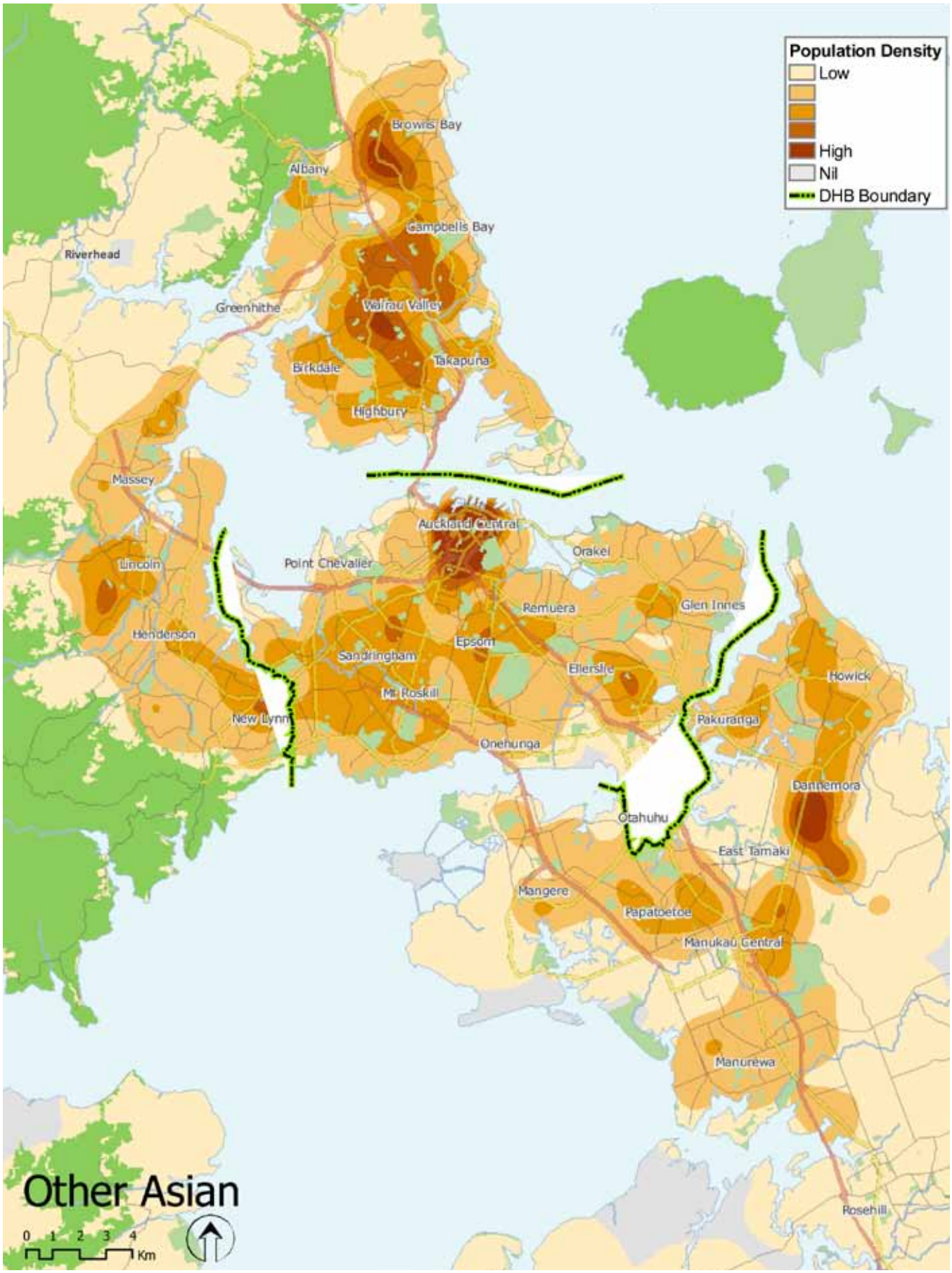
Source: Auckland Regional Public Health Service

Figure 9: Indian Population Density in the Auckland region, 2011



Source: Auckland Regional Public Health Service

Figure 10: Other Asian Population Density in the Auckland region, 2011



Source: Auckland Regional Public Health Service

4.5 Religion

Table 6 indicates that the majority of Chinese and Japanese people in Auckland have no religious affiliation, while around 20% are Christian and over 10% are Buddhist. Many Chinese people also follow philosophical traditions such as Taoism which would not be classified as religions but which are guiding influences in their lives. More than 50% of Auckland Indians are Hindu, and other common religions include Islam, Christianity, and Sikhism (included under 'Other Religion' in Table 6). The vast majority of Auckland Korean and Filipino populations identify as being Christian, while Buddhism is the predominant religious affiliation among Cambodian and Sri Lankan people across the region. Small proportions of Cambodians and Sri Lankans also identify as being Muslim.

Table 6: Religious affiliation of selected Asian ethnic groups (total response ethnicity) across the Auckland region, census 2006

Ethnicity	Christian		Buddhist		Hindu		Muslim		Other Religion		No Religion	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Chinese	20,997	21	13,056	13	105	0	240	0	732	1	56,337	57
Indian	12,099	16	183	0	41,685	56	9,345	13	7,245	10	2,535	3
Filipino	9,288	94	21	0	12	0	27	0	39	0	225	2
Cambodian	255	8	2,490	74	3	0	18	1	12	0	414	12
Sri Lankan	1,218	24	2,121	42	1,338	26	156	3	18	0	150	3
Japanese	570	11	930	18	6	0	30	0	114	2	3,213	61
Korean	15,231	71	1,170	5	0	0	6	0	57	0	4,020	19
TOTAL ASIAN	**63,417**	**27**	**25,110**	**11**	**43,485**	**19**	**14,703**	**6**	**8,334**	**4**	**68,424**	**30**

Source: Statistics New Zealand, total response ethnicity. Please note that the percentage totals do not add up to 100% as some people did not answer the census question or had unidentifiable responses.

4.6 Source Country of Migrants to Auckland

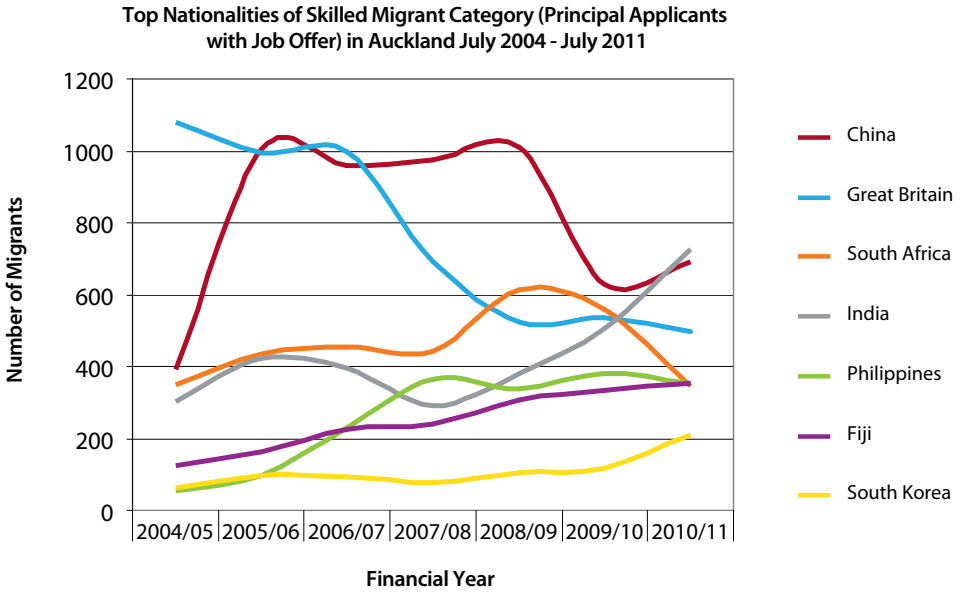
A significant proportion of Asian people in Auckland are recent migrants. Around 60% of migrants who permanently move to New Zealand do so under the 'skilled/business migrant category' of the New Zealand Residence Programme (NZRP). Asian people can also obtain New Zealand residence under the three other streams of the NZRP: the 'uncapped family category' for partners and dependents (20% of NZRP), the 'capped family category' for parents and siblings (10% of NZRP), and the 'humanitarian' category for refugees (10% of NZRP). A large number of Asian youth also choose to study in Auckland as international students.

Sections 4.6.1 and 4.6.2 present data regarding the most common source countries of skilled migrants to Auckland, and the number of Asian international students in Auckland.

4.6.1 Skilled Migrants to Auckland

Figure 11 highlights the decreasing numbers of British migrants, a decline over recent years in the number of Chinese migrants and an increase in Indian, South Korean, Filipino and Fijian migrants taking up residence in Auckland. This changing pattern of migrant source countries for the Auckland region is also being observed nationally.[44]

Figure 11: Nationality of Skilled Migrant Principal Applicants with job offers in Auckland, July 2004 to July 2011



Source: Department of Labour

4.6.2 Asian International Students in Auckland

Table 7: Asian International Students in Auckland by Source Country

Nationality	Number of Approvals
China	9,739
India	6,616
South Korea	4,761
Malaysia	1,020
Japan	968
Vietnam	850
Thailand	781
Fiji	670
Non-Asian	7,934
Total	**33,339**

Source: Department of Labour and Auckland Regional Settlement Strategy Economic Settlement Action Leadership Team, 'Overview of Auckland's Labour Market and Migration trends 2011', page 23, Wellington, 2011.

Table 7 indicates that Asian students comprise the vast majority of international students in Auckland. China, India and South Korea are the three most common source countries for Asian international students. Asian students are not eligible for publically-funded health care in New Zealand. However, they can access privately-funded health care and will be counted in the number of events (ie numerator) for indicators such as privately-funded terminations of pregnancy. This creates a numerator/denominator bias as these Asian students are not included in Asian population counts for Auckland (ie denominator).

4.7 Summary of Population Demography

Ethnic Composition of Auckland

Across the Auckland region, an estimated 9% of people identified as being Chinese, 7% as being Indian and 6% as being Other Asian in 2010. ADHB has the largest Asian population, with an estimated 27% of people identifying as being Chinese, Indian or Other Asian. In ADHB, WDHB and across the Auckland region as a whole, the Asian population (ie Chinese, Indians and Other Asians together) are the second largest ethnic group and are the third largest group in CMDHB after European/Others and Pacific peoples.

Population Size

Chinese and Indian populations are the largest Asian communities in Auckland. Among Other Asian people in Auckland, Koreans have the largest population.

Across Auckland, according to 2010 estimated resident figures, there are 127,455 Chinese people, 100,350 Indians and 84,044 Other Asian people.

The populations of Chinese, Indian and Other Asian peoples across Auckland are expected to increase more than 60% by 2026.

Population Age and Sex Structure

Chinese, Indian and Other Asian groups in Auckland are relatively young populations, with large numbers of Chinese people aged 20-29 years and Indian people aged 25-34 years. The proportion of males and females is relatively similar among Chinese and Indians, but the Other Asian population has greater numbers of women aged 25 years or older.

Population Density

The Auckland suburbs with the greatest density of Chinese people are Auckland Central, Epsom, New Lynn and Dannemora. The Auckland suburbs with the greatest Indian population density were Auckland Central, Sandringham, Mount Roskill, New Lynn, Otahuhu, Mangere, Papatoetoe, Manukau Central and Dannemora. Suburbs with the greatest density of Other Asian people were Browns Bay, Wairau Valley, Auckland Central, and Dannemora.

Religion

The majority of Chinese people in Auckland have no religious affiliation, while around 20% are Christian and over 10% are Buddhist. More than 50% of Auckland Indians are Hindu and other common religions include Islam, Christianity, and Sikhism. Other Asian people in Auckland have widely varied religious affiliations including Christians, Buddhists and Muslims.

Source Country of Migrants to Auckland

Among skilled migrants to Auckland, a decline has been observed over recent years in the number of Chinese migrants, with an increase in Indian, South Korean, Filipino and Fijian migrants.

Asian students comprise the vast majority of international students in Auckland. China, India and South Korea are the three most common source countries for Asian international students.

5. Overall Health Outcomes

This section presents data relating to life expectancy and mortality among Asian communities across Auckland.

5.1 Life Expectancy

Life expectancy is defined as the number of years that a newborn could expect to live, based on current morbidity and mortality trends.[45] Women have higher life expectancy than men.

Table 8 presents 2010 life expectancy data for different ethnic groups across Auckland. A limitation of this data is that calculation of life expectancy is based on the assumption that the population characteristics of different ethnic groups will remain stable over time, whereas Asian populations in Auckland are changing rapidly. Indian and Other Asian men and women across the three DHBs have higher life expectancy than European/Other people, with the exception of Other Asian men in ADHB. Chinese women in CMDHB have the longest life expectancy (93 years) of any of the ethnic groups examined across the three DHBs, and this is approximately 9 years longer than the life expectancy of their European/Other counterparts. The higher life expectancy of Asian populations in Auckland is likely to reflect immigration selection processes and the attendant 'healthy migrant' effect, given the high proportion of Chinese, Indian and Other Asian migrants.

Table 8: Life expectancy at birth (in years) by prioritised ethnicity and sex, 2010

Sex	Ethnicity	DHB			
		ADHB	CMDHB	WDHB	Auckland region
Male	Chinese	84	87	92	87
	Indian	82	84	83	83
	Other Asian	79	82	85	83
	Maori	72	72	75	73
	Pacific	72	74	75	74
	European/Other*	81	80	81	81
Female	Chinese	86	93	89	89
	Indian	84	90	87	86
	Other Asian	85	86	88	87
	Maori	75	73	78	75
	Pacific	75	78	79	77
	European/Other*	83	84	85	84

Source: Northern DHB Support Agency, Standard prioritised ethnicity
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

5.2 Mortality

5.2.1 Total Mortality

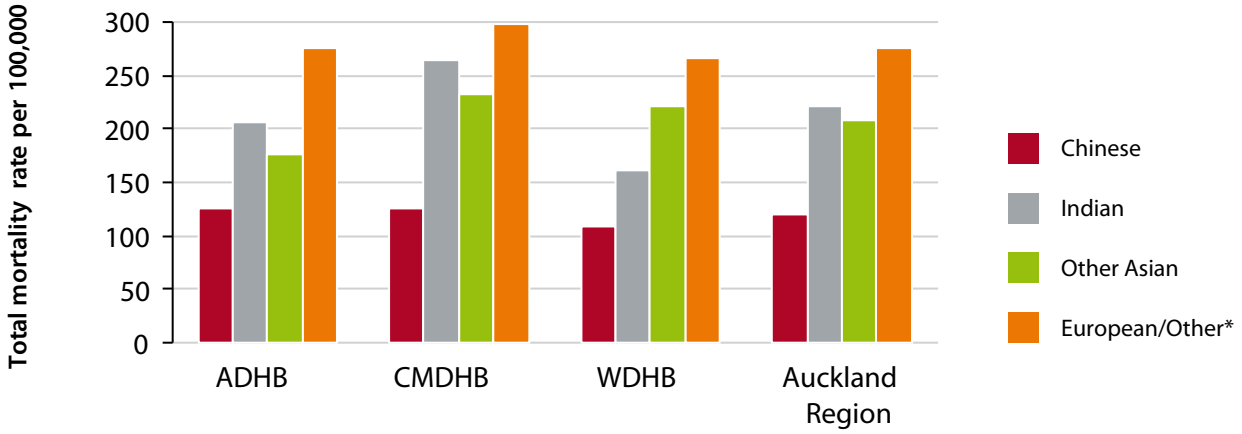
Table 9, Figure 12 and Figure 13 indicate that Chinese, Indian and Other Asian groups had a lower mortality rate for all causes, among both men and women aged 15 to 74 years, as compared to European/Other people. Chinese men and women had the lowest all-cause mortality rates (males: 120 deaths per 100,000 people across the Auckland region; females: 68 deaths per 100,000 people across the Auckland region) among the Asian ethnic groups examined.

Table 9: Age-standardised total mortality rate for all causes (per 100,000 with 95% CI) by prioritised ethnicity and sex among people aged 15-74 years, 2006-2008

Sex	Ethnicity	DHB			
		ADHB	CMDHB	WDHB	Auckland region
Male	Chinese	125 (95-162)	125 (91-169)	108 (75-151)	120 (100-141)
	Indian	206 (153-274)	264 (208-333)	161 (96-256)	221 (186-261)
	Other Asian	177 (105-284)	233 (148-354)	222 (148-324)	209 (163-266)
	European/Other*	276 (257-296)	298 (278-320)	266 (251-281)	276 (266-286)
Female	Chinese	67 (46-93)	80 (54-115)	58 (36-89)	68 (55-85)
	Indian	77 (47-119)	154 (110-212)	162 (96-260)	124 (98-155)
	Other Asian	179 (112-272)	171 (109-256)	153 (101-224)	164 (129-207)
	European/Other*	184 (169-200)	189 (174-206)	169 (158-181)	178 (171-186)

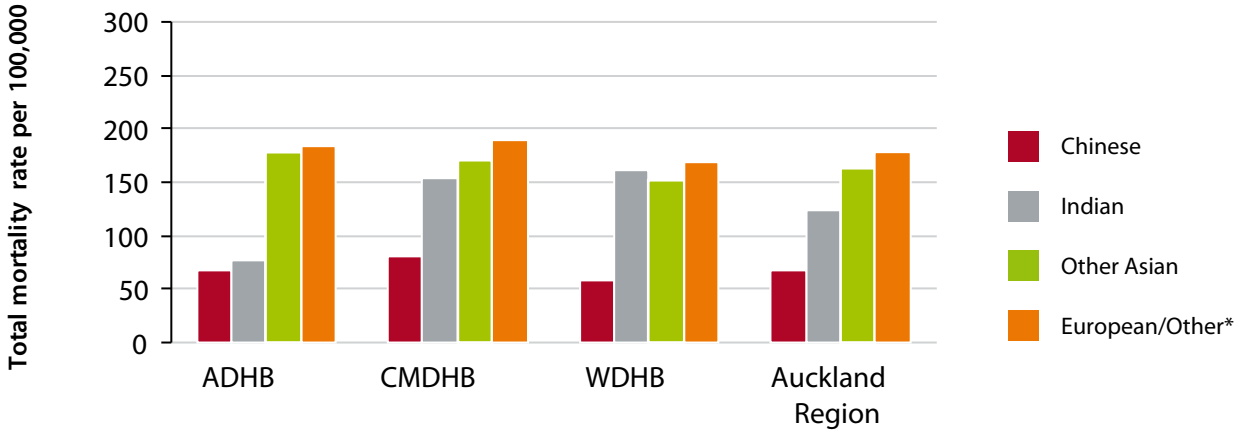
Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 12: Age-standardised total mortality rate for all causes (per 100,000) by prioritised ethnicity among MALES aged 15-74 years, 2006-2008



Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 13: Age-standardised total mortality rate for all causes (per 100,000) by prioritised ethnicity among FEMALES aged 15-74 years, 2006-2008



Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

5.2.2 Potentially Avoidable Mortality

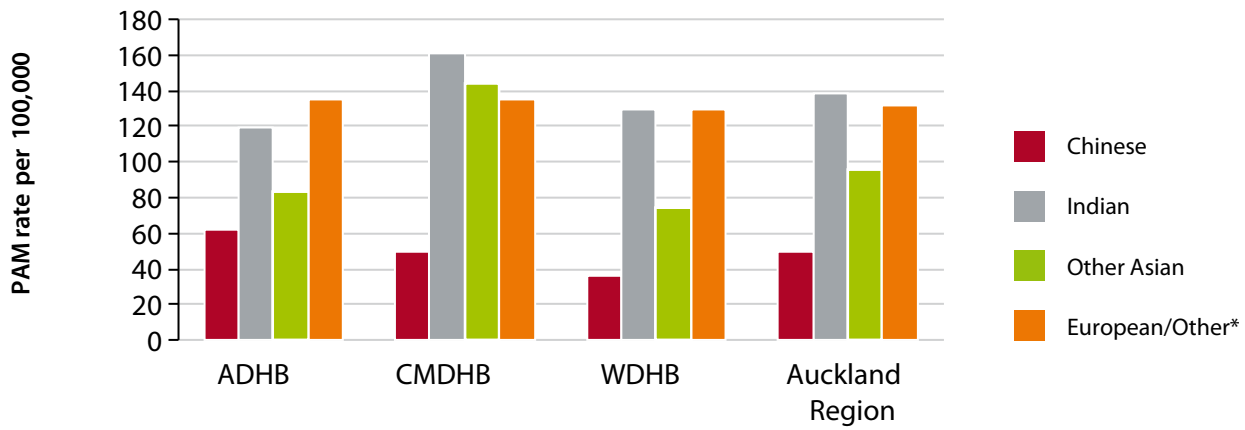
Potentially avoidable mortality (PAM) includes causes of death among adults under the age of 75 years from preventable or treatable conditions (given present knowledge of population-based and individual-level interventions).[46]

Table 10, Figure 14 and Figure 15 present the age-standardised PAM rate for all causes among Asian and European/Other men and women aged 15-74 years across Auckland. Chinese men and women had the lowest PAM rates of the ethnic groups examined. There were no significant differences between the PAM rates of Indian and European/Other men and women, or between Other Asian people and their European/Other counterparts.

Table 10: Age-standardised potentially avoidable mortality rate for all causes (per 100,000 with 95% CI) by prioritised ethnicity and sex among people aged 15-74 years, 2006-2008

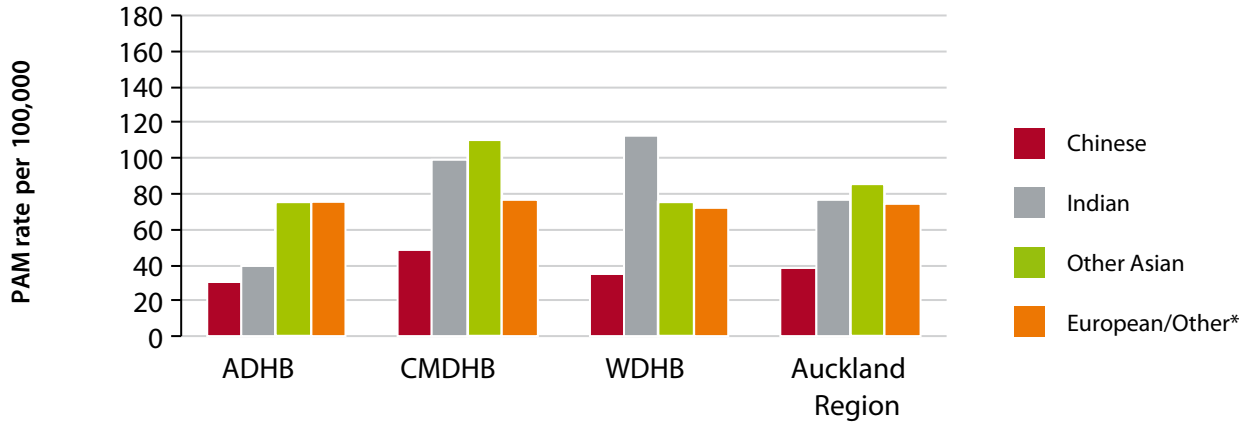
Sex	Ethnicity	DHB			
		ADHB	CMDHB	WDHB	Auckland region
Male	Chinese	62 (41-90)	50 (30-80)	36 (18-65)	50 (38-65)
	Indian	119 (78-173)	161 (118-217)	129 (72-217)	138 (110-170)
	Other Asian	83 (38-165)	144 (77-249)	74 (36-141)	96 (66-137)
	European/Other*	135 (122-149)	135 (122-151)	130 (120-141)	132 (125-140)
Female	Chinese	31 (18-51)	49 (30-78)	35 (19-61)	38 (28-50)
	Indian	40 (20-73)	99 (65-147)	113 (59-200)	77 (57-103)
	Other Asian	75 (36-143)	110 (62-183)	75 (41-130)	86 (61-117)
	European/Other*	75 (66-86)	77 (67-88)	72 (65-80)	74 (69-80)

Figure 14: Age-standardised potentially avoidable mortality rate for all causes (per 100,000) by prioritised ethnicity among MALES aged 15-74 years, 2006-2008



Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 15: Age-standardised potentially avoidable mortality rate for all causes (per 100,000) by prioritised ethnicity among FEMALES aged 15-74 years, 2006-2008



Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Table 11 presents the leading causes of PAM for Asian and European/Other men and women across the Auckland region. CVD was the leading cause of PAM, and lung cancer, injuries and suicide were among the top five causes, for all ethnic groups examined. Diabetes was the second leading cause among Indian and Other Asian people.

Table 11: Leading causes of potentially avoidable mortality across the Auckland region by prioritised ethnicity among males and females combined aged 15-74 years (age standardised rate per 100,000), 2006-2008

Rank	Chinese			Indian			Other Asian			European/Other*		
	Cause of PAM	No.	PAM Rate	Cause of PAM	No.	PAM Rate	Cause of PAM	No.	PAM Rate	Cause of PAM	No.	PAM Rate
1	CVD	38	16	CVD	81	61	CVD	30	32	CVD	797	34
2	Lung cancer	35	14	Diabetes	27	21	Diabetes	11	15	Injuries	405	23
3	Injuries	26	10	Injuries	13	7	Lung cancer	14	13	Lung cancer	432	18
4	Road traffic crashes	4	4	Lung cancer	7	5	Injuries	15	11	Suicide	260	15
5	Suicide	3	3	Suicide	7	4	Suicide	11	8	Road traffic crashes	95	6

Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

5.3 Summary of Health Outcomes

Life Expectancy

Chinese, Indian and Other Asian men and women across the three DHBs generally have higher life expectancy than European/Other peoples. Chinese women in CMDHB have the longest life expectancy (93 years) of any of the ethnic groups examined across the three DHBs.

Mortality

Chinese, Indian and Other Asian groups had a lower mortality rate for all causes, among both men and women aged 15 to 74 years, as compared to European/Other people, with the lowest rates among Chinese people.

Chinese men and women had the lowest potentially avoidable mortality rates of the ethnic groups examined. There were no significant differences between the potentially avoidable mortality rates of Indian and European/Other men and women, or between Other Asian people and their European/Other counterparts.

CVD was the leading cause of potentially avoidable mortality, and lung cancer, injuries and suicide were among the top five causes, for all ethnic groups examined. Diabetes was the second leading cause among Indian and Other Asian people.

6. Overall Health Services Utilisation

This section presents the data relating to utilisation of primary health care as well as secondary and tertiary services.

6.1 Primary care

6.1.1 PHO Enrolment

Table 12 presents PHO enrolment numbers as a percentage of 2010 estimated resident figures across Auckland.

While the PHO enrolment database provides an up-to-date count of enrolled patients, there are a number of issues with the PHO enrolment data presented. Firstly, estimated resident population projections have been used as the denominator to calculate the proportion of each ethnic group in Auckland that is enrolled with a PHO. While these projections are the best available estimates of population counts given the cancellation of the 2011 census, they will not be accurate and may have resulted in exaggeration of under-enrolment in the enrolment rates presented below. Secondly, a recent study conducted in Auckland noted significant inaccuracies in the ethnicity coding at primary care practice level. Random samples from Auckland DHB general practices were selected and visited, and the ethnicity recorded in the practice registry of the first ten patients selected was compared to ethnicity according to the Census 2006. The overall discrepancy was 10%, with 35-45% overestimation of Pacific patients. [47] Finally, the estimated resident projections categorise DHB according to DHB of domicile. The PHO enrolment database also uses DHB of domicile where available, but this is not recorded in the database for around 30% of patients. For these patients, DHB has been added according to the PHO location which will lead to a numerator/denominator mismatch for those patients whose PHO falls into a different DHB from their DHB of domicile.

Table 12: 2010 quarter 1 PHO enrolment figures as a percentage of 2010 estimated resident population, males and females combined

Ethnicity	ADHB		CMDHB		WDHB		Auckland region	
	PHO Q1	% ER	PHO Q1	% ER	PHO Q1	% ER	PHO Q1	% ER
Chinese	40,856	73%	22,727	63%	16,080	45%	79,663	63%
Indian	34,864	87%	37,741	94%	10,439	52%	83,044	83%
Other Asian	28,994	104%	21,826	104%	25,650	73%	76,470	91%
Maori	26,296	72%	70,380	85%	36,632	70%	133,308	78%
Pacific	65,831	127%	118,870	110%	30,400	80%	215,101	109%
European/Other*	267,037	117%	210,152	104%	337,517	95%	814,706	102%

Source: PHO Datamart Quarter 1 (January to March) 2010,Statistics New Zealand and CMDHB; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

PHO enrolment rates for Chinese (as a percentage of estimated resident population figures) were 73% for ADHB, 63% for CMDHB, 45% for WDHB and 63% across the Auckland region. A notable proportion of Auckland Chinese people are likely to be students who may seek primary care as an unenrolled patient. PHO enrolment rates for ADHB and CMDHB people of Indian and Other Asian ethnicity were above 85%, but only 52% of WDHB Indians and 73% of WDHB Other Asians were enrolled with a PHO.

The Asian Health Action Plan for WDHB 2010/11 – 2012/13 identifies improvement of Asian PHO enrolment rates as an immediate priority. Targets include increasing enrolment rates at PHO level by 7% of each PHO's Asian enrolees.[48] It is likely that language presents a significant barrier to PHO enrolment for Koreans and other South East Asian communities, where English proficiency is a recognised issue. (L Zhou, personal communication, 2012).

6.1.2 Care Plus Enrolment

Care Plus was an initiative introduced in 2004 as part of the New Zealand Primary Care Strategy, to improve the management of chronic conditions, reduce health inequalities, facilitate co-ordination of services, and reduce service costs. The programme targets people with high health needs, including those with chronic conditions, acute medical or mental health needs, and terminal illnesses.[49] Table 13 presents data regarding Care Plus enrolments, as a percentage of PHO enrolments, by ethnic group for 2010.

Indian people 45 years of age or older in all three DHBs had the highest rates of Care Plus enrolment of all the Asian groups examined, as compared to European/Others. Other Asian people aged 65 years or older in WDHB also had high enrolment rates while Chinese people across Auckland had the lowest rates of Care Plus enrolment, as compared to European/Others. These trends are consistent with data that will be presented in subsequent sections regarding the high prevalence of chronic conditions such as CVD and diabetes among Indians and, to a lesser extent, Other Asian populations in Auckland.

Table 13: Enrolment in the Care Plus Primary care initiative (number and percentage of PHO enrolments) by prioritised ethnicity and age group, males and females combined, 2010

Ethnicity	Age (Years)	DHB			
		ADHB % (Number)	CMDHB % (Number)	WDHB % (Number)	Auckland region % (Number)
Chinese	15 to 44	0.3% (43)	0.1% (10)	1% (54)	0.3% (107)
	45 to 64	3% (224)	2% (127)	5% (232)	3% (583)
	65+	11% (414)	8% (219)	12% (208)	10% (841)
Chinese Total		**2% (681)**	**2% (256)**	**3% (494)**	**2% (1,531)**
Indian	15 to 44	1% (200)	2% (248)	2% (135)	1% (583)
	45 to 64	10% (720)	14% (983)	12% (427)	12% (2,130)
	65+	25% (472)	23% (448)	25% (212)	24% (1,132)
Indian Total		**6% (1,392)**	**7% (1,679)**	**6% (772)**	**6% (3,845)**
Other Asian	15 to 44	1% (89)	1% (44)	1% (110)	1% (243)
	45 to 64	7% (355)	6% (298)	6% (482)	6% (1,135)
	65+	16% (170)	14% (145)	21% (350)	18% (665)
Other Asian Total		**3% (614)**	**3% (487)**	**4% (942)**	**4% (2,043)**
European/Other*	15 to 44	1% (787)	1% (583)	1% (1,795)	1% (3,165)
	45 to 64	5% (2,901)	5% (2,794)	5% (4,765)	5% (10,460)
	65+	17% (5,225)	16% (5,056)	14% (7,386)	15% (17,667)
European/Other* Total		**5% (8,913)**	**5% (8,533)**	**5% (13,946)**	**5% (31,292)**

Source: PHO Datamart Quarter 1 (January to March) 2010; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

6.2 Secondary and Tertiary Care

6.2.1 Potentially Avoidable Hospitalisations

Potentially avoidable hospitalisations (PAH) represent those hospital admissions that are considered avoidable. These comprise:

- Hospitalisations resulting from diseases that are potentially preventable through population-based health promotion strategies such as smoke-free legislation, healthy diet, and physical activity.
- Ambulatory sensitive hospitalisations: that is, hospitalisations for conditions that are able to be cared for in a primary care setting, such as cardiovascular disease, diabetes control, or skin infections.

People aged 75 years or older are excluded due to the high prevalence of co-morbidities among elderly individuals. Injury-related hospitalisations are also excluded, as different preventive strategies are required.

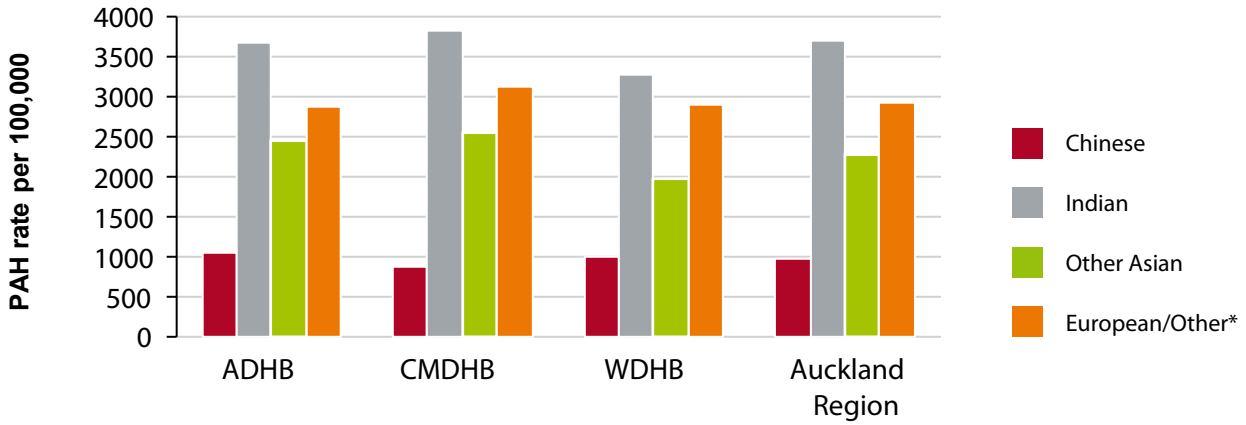
Table 14, Figure 16 and Figure 17 indicate that Indian men had higher PAH rates as compared to European/Other men and these differences were significant. Indian women in Auckland had slightly higher PAH rates (significant in all areas except ADHB), and Other Asian men and women had slightly lower rates, than their European/Other counterparts. Chinese men and women had the lowest PAH rates of all the ethnic groups examined.

Table 14: Age-standardised potentially avoidable hospitalisation rate for all causes (per 100,000 with 95% CI) by prioritised ethnicity and sex among people aged 15-74 years, 2008-2010

Sex	Ethnicity	DHB			
		ADHB	CMDHB	WDHB	Auckland region
Male	Chinese	1060 (951-1170)	886 (764-1009)	997 (869-1125)	988 (919-1056)
	Indian	3688 (3345-4030)	3818 (3511-4124)	3269 (3257-4081)	3715 (3516-3915)
	Other Asian	2457 (2071-2843)	2546 (2146-2946)	1970 (1617-2322)	2279 (2061-2322)
	European/Other*	2870 (2773-2966)	3137 (3024-3250)	2893 (2819-2967)	2936 (2885-2987)
Female	Chinese	1241 (1134-1347)	933 (816-1050)	1142 (1006-1278)	1121 (1052-1189)
	Indian	2876 (2634-3119)	3485 (3199-3770)	3225 (2954-3697)	3220 (3051-3388)
	Other Asian	2160 (1885-2436)	2220 (1953-2487)	1966 (1723-2208)	2079 (1930-2228)
	European/Other*	2581 (2497-2664)	3096 (2994-3197)	2853 (2780-2925)	2826 (2778-2874)

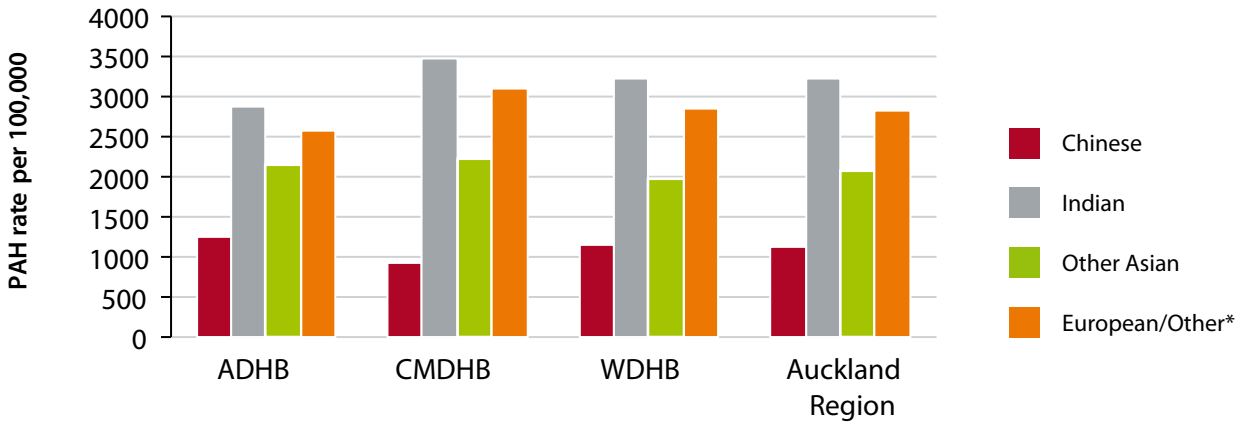
Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 16: Age-standardised potentially avoidable hospitalisation rate for all causes (per 100,000) by prioritised ethnicity among MALES aged 15-74 years, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 17: Age-standardised potentially avoidable hospitalisation rate for all causes (per 100,000) by prioritised ethnicity among FEMALES aged 15-74 years, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Table 15 indicates that the top 3 causes of potentially avoidable hospitalisations for all three Asian groups were CVD, diabetes and kidney/urine infections. Cellulitis, pneumonia, sexually transmitted infections, and chronic obstructive respiratory disease (CORD) also featured among the leading causes of PAH for all the Asian groups. The leading causes of PAH among European/Others were similar, apart from the lower ranking of diabetes as compared to the Asian groups examined.

Table 15: Leading causes of potentially avoidable hospitalisation across the Auckland region by prioritised ethnicity among males and females combined aged 15-74 years (age standardised rate per 100,000), 2008-2010

Rank	Chinese		Indian		Other Asian		European/Other*	
	Cause of PAH	PAH Rate	Cause of PAH	PAH Rate	Cause of PAH	PAH Rate	Cause of PAH	PAH Rate
1	CVD	159	CVD	632	CVD	344	CVD	357
2	Diabetes	100	Diabetes	455	Diabetes	210	Cellulitis	263
3	Kidney/urine infections	75	Kidney/urine infections	185	Kidney/urine infections	155	Kidney/urine infections	155
4	Sexually transmitted infections	59	Cellulitis	146	Cellulitis	94	Skin cancers	94
5	Cellulitis	58	Pneumonia	134	Pneumonia	84	Diabetes	84
6	Pneumonia	49	Nutrition	133	Sexually transmitted infections	81	Pneumonia	81
7	Other respiratory infections	36	Asthma	123	CORD	63	CORD	63
8	Liver cancer	33	Sexually transmitted infections	104	Other respiratory infections	62	Sexually transmitted infections	62
9	CORD	24	CORD	101	Asthma	61	Epilepsy	61
10	Gastroenteritis	23	Congestive heart failure	96	Liver cancer	52	Asthma	52

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

6.3 Summary of Overall Health Services Utilisation

Primary Care

PHO enrolment rates, as a percentage of estimated resident population figures, were low across Auckland among Chinese people (73% for ADHB, 63% for CMDHB, 45% for WDHB and 63% across the Auckland region). PHO enrolment rates for Indians and Other Asian residing in WDHB were also low (Indians 52% and Other Asians 73%)

Compared to European/Other people, Indians aged 45 years or older in all three DHBs had the highest rates of Care Plus enrolment and Other Asian people aged 65 years or older in WDHB also had high enrolment rates. Chinese people across Auckland had the lowest rates of Care Plus enrolment of the ethnic groups examined.

Secondary and Tertiary Care

Indian men had higher PAH rates as compared to European/Other men and these differences were significant. Indian women in Auckland had slightly higher potentially avoidable hospitalisation rates (generally significant), and Other Asian men and women had slightly lower rates, than their European/Other counterparts. Chinese men and women had the lowest PAH rates of all the ethnic groups examined.

The top 3 causes of potentially avoidable hospitalisations for all three Asian groups were CVD, diabetes and kidney/urine infections.

7. Patient Safety

Patient safety was highlighted as a strategic and monitoring priority in the Northern Region Health Plan. Key initiatives planned for implementation in 2011/2012 including reviewing recent adverse health-care-related deaths, and reducing both falls causing harm and pressure injuries across the region by 20%. This section presents available data relating to those three aspects of patient safety.

7.1 Mortality from Adverse Health Care Events

The mortality rate from adverse health care events in the Auckland region was negligible across all ethnicities. Between 2006 and 2008, no such deaths occurred among Asian peoples and eight deaths occurred among non-Asian peoples. (Maori: 2 deaths; Pacific: 2 deaths; European/Others: 4 deaths).

7.2 Non-fatal Patient Safety-Related Events Overall

Rates of non-fatal falls and pressure sores occurring in hospital are presented in Table 16 and Figure 18. Due to the small number of events occurring among the Asian sub-groups, rates have been presented for the Auckland region as a whole and for males and females combined and should be interpreted cautiously. Pressure sores recorded as a secondary diagnosis at hospital discharge have been used as a proxy for pressure sores occurring in hospital. These data probably underestimate the true rates across the region, as it is likely that some falls and pressure sores are not coded as such in the hospital patient files. Data were not available regarding falls and pressure sores occurring in residential or non-hospital health care settings.

Falls in hospital were recorded less frequently among all three Asian groups as compared to European/Others, with the lowest rates noted among Chinese people.

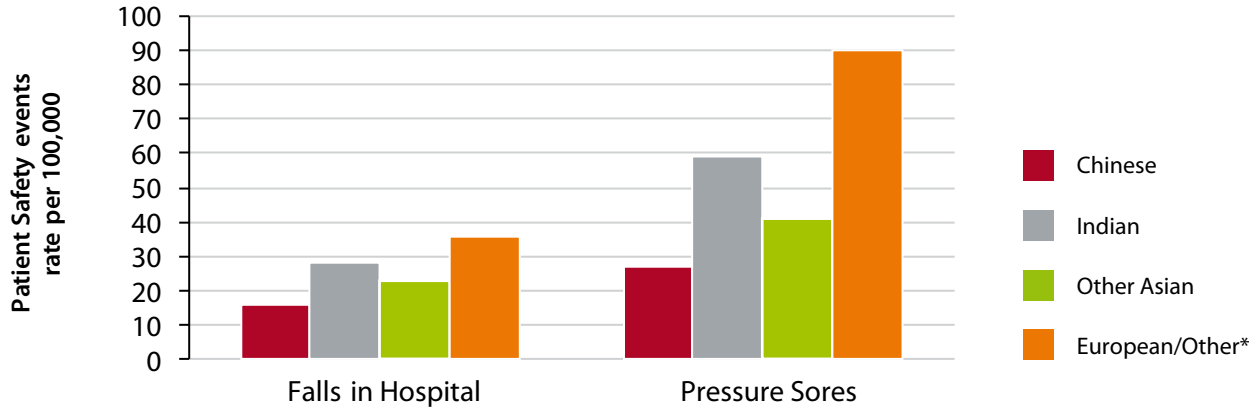
Lower rates of pressure sores were also recorded among Chinese, Indian and Other Asian people as compared to European/Others. However, Indians had the highest rate of pressure sores among the three Asian groups examined. This may reflect the high rates of hospitalisation for chronic conditions such as CVD and diabetes among Indian people in Auckland (presented in section 8.2.1 and section 9.3.1)

Table 16: Age-standardised rate (per 100,000 with 95% CI) of non-fatal patient safety-related events by prioritised ethnicity among males and females combined aged 15 years or older, 2008-2010

Condition	Ethnicity	Number	Rate per 100,000 (95% CI)
Falls in hospital	Chinese	33	16 (10-22)
	Indian	37	28 (16-39)
	Other Asian	20	23 (10-36)
	European/Other*	1,227	36 (33-38)
Pressure sores in hospital#	Chinese	48	27 (19-34)
	Indian	75	59 (44-73)
	Other Asian	36	41 (26-56)
	European/Other*	3,070	90 (87-93)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
#Pressure sores recorded as a secondary diagnosis at hospital discharge have been used as a proxy for pressure sores occurring in hospital.

Figure 18: Age-standardised rate (per 100,000) of falls in hospital and pressure sores by prioritised ethnicity among males and females combined aged 15 years or older, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
Please note that pressure sores recorded as a secondary diagnosis at hospital discharge have been used as a proxy for pressure sores occurring in hospital.

7.3 Summary of Patient Safety

Mortality

The mortality rate between 2006 and 2008 from adverse health care events in the Auckland region was negligible across all ethnicities.

Non-fatal Patient Safety-Related Events

Falls in hospital are recorded less frequently among all three Asian groups as compared to European/Others, with the lowest rates noted among Chinese people.

Lower rates of pressure sores were also recorded among Chinese, Indian and Other Asian people as compared to European/Others. However, Indians had the highest rate of pressure sores and falls among the three Asian groups examined.

8. Cardiovascular Disease

This section presents the following cardiovascular data for Asian people across Auckland:

- Mortality from cardiovascular disease
- Hospitalisations from cardiovascular disease
- Coronary procedures
- Congestive heart failure
- Pharmacotherapy.

For this section, data for the Asian ethnic groups have been compared to European/Other, Maori and Pacific people, as the latter two ethnic groups are considered to be high risk for this condition. Data have generally been restricted to people aged between 35 to 74 years, as cardiovascular disease is uncommon below 35 years of age and co-morbidities may affect morbidity and mortality rates above 75 years of age. All hospitalisation data relate to publically-funded service provision.

8.1 Mortality from Cardiovascular Disease

The cardiovascular mortality data presented in this section have not been disaggregated for each DHB because the number of deaths occurring in the three Asian groups, particularly among women, was too small to allow meaningful conclusions to be drawn.

8.1.1 Cardiovascular Disease Mortality Overall

Table 17 and Figure 19 present data regarding overall mortality rates from cardiovascular disease among men and women aged 35 to 74 years across the Auckland region.

Indian men had a higher mortality rate from cardiovascular disease as compared to European/Other men and lower rates than Maori and Pacific men, and each of these differences was significant. Other Asian men had a non-significantly lower mortality rate from cardiovascular disease as compared to European/Other men, with the lowest rates of all the ethnic groups observed among Chinese men.

Similar trends were apparent among women, although the ethnic-specific cardiovascular mortality rates for women are lower than those observed among men across Auckland and the difference between rates for Indian and European/Other women was not significant.

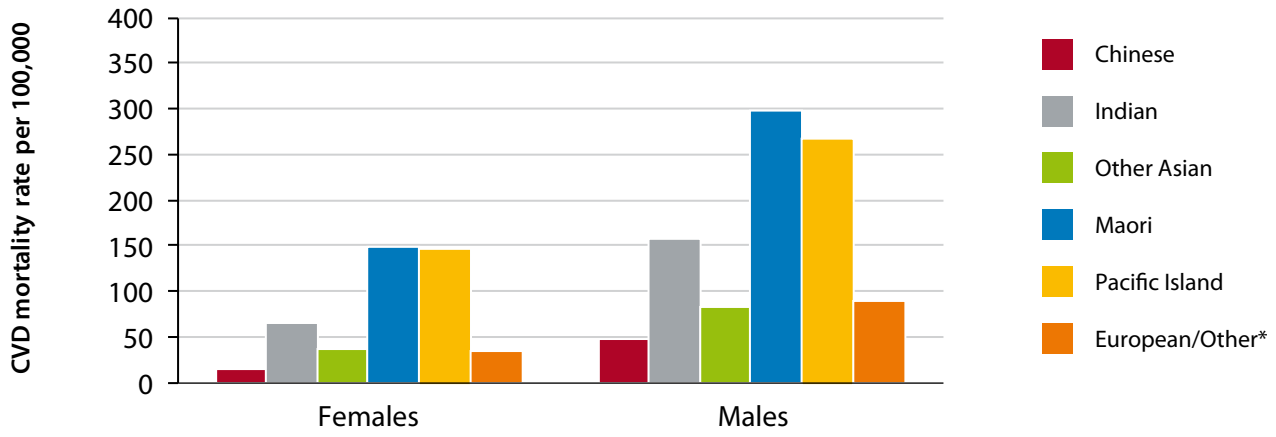
Comparison of mortality data and hospitalisation rates for cardiovascular disease (presented in section 8.2) indicate that the burden of cardiovascular morbidity is relatively high among Indians in particular, but the burden of cardiovascular mortality, while higher than among European/Others, is not as prominent. This is likely to be accounted for by the relatively recent arrival of a large proportion of Asian communities in Auckland, such that the cardiovascular morbidity among Indian and, to a lesser extent, Other Asian populations has not yet had time to be fully reflected in the mortality data of those communities.

Table 17: Age-standardised mortality rate for cardiovascular disease (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity and sex among people aged 35-74 years, 2006-2008

Sex	Ethnicity	Number	Rate per 100,000 (95%CI)
Male	Chinese	29	47 (31-68)
	Indian	57	157 (118-207)
	Other Asian	18	82 (45-141)
	Maori	169	298 (253-350)
	Pacific	191	267 (229-308)
	European/Other*	564	90 (83-98)
Female	Chinese	9	14 (6-26)
	Indian	23	65 (40-99)
	Other Asian	9	37 (16-74)
	Maori	89	148 (118-183)
	Pacific	117	147 (122-177)
	European/Other*	230	35 (31-40)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
†Cardiovascular disease includes patients with hospital admissions for coronary heart disease, stroke, peripheral vascular disease and coronary procedures

Figure 19: Age-standardised mortality rate for cardiovascular disease (per 100,000) across the Auckland region by prioritised ethnicity and sex among people aged 35-74 years, 2006-2008



Source: National Mortality Collection; standard prioritised ethnicity.

*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

†All cardiovascular disease includes patients with hospital admissions for coronary heart disease, stroke, peripheral vascular disease and coronary procedures

8.1.2 Coronary Heart Disease Mortality

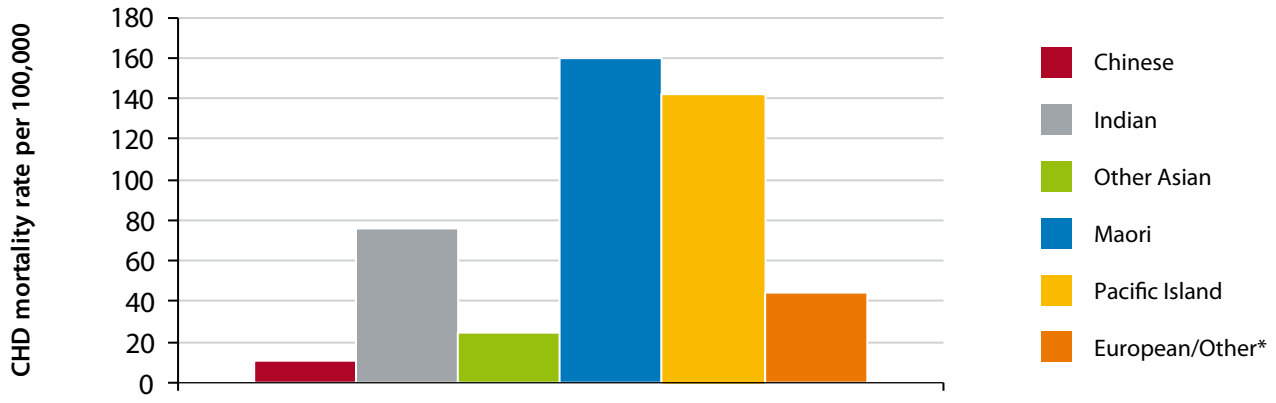
Table 18 and Figure 20 present data regarding mortality from coronary heart disease among people aged 35 to 74 years. Data have been presented for men and women combined due to the low number of deaths among Asian groups. Indian people had a higher mortality rate as compared to European/Other people and a lower rate than both Maori and Pacific people. All of these comparisons were significant. There was no significant difference in the rates of Other Asian and European/Other people. Chinese people had the lowest rates of all the ethnic groups examined.

Table 18: Age-standardised mortality rate for coronary heart disease (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity among males and females combined aged 35-74 years, 2006-2008

Ethnicity	Number	Rate per 100,000 (95%CI)
Chinese	14	11 (6-19)
Indian	55	76 (57-101)
Other Asian	9	24 (11-47)
Maori	189	160 (137-185)
Pacific	218	142 (123-162)
European/Other*	558	44 (41-48)

Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 20: Age-standardised mortality rate for coronary heart disease (per 100,000) across the Auckland region by prioritised ethnicity among males and females combined aged 35-74 years, 2006-2008



Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

8.1.3 Stroke Mortality

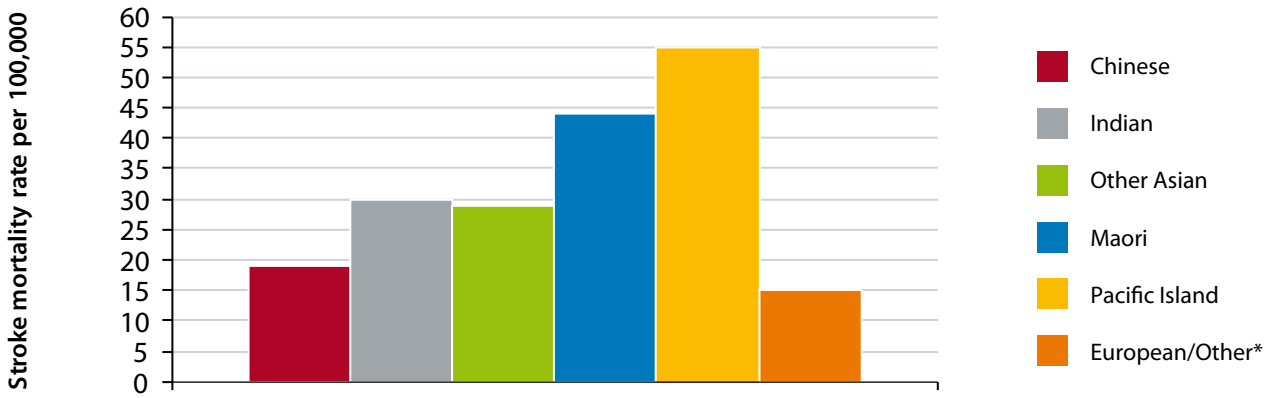
Table 19 and Figure 21 present data regarding mortality from stroke among Auckland people aged 35 to 74 years. Data have been presented for men and women combined due to the low number of deaths from stroke among the Asian groups between 2006 and 2008. All three Asian groups had higher stroke mortality rates as compared to their European/Other counterparts, but only the comparison between Indians (who had the highest stroke mortality rate of the Asian groups) and European/Other people was significant. The rate among Indian people was lower than the rates among both Maori and Pacific people, but neither of these differences was significant.

Table 19: Age-standardised mortality rate for stroke (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity among males and females combined aged 35-74 years, 2006-2008

Ethnicity	Number	Rate per 100,000 (95%CI)
Chinese	24	19 (12-30)
Indian	22	30 (19-47)
Other Asian	16	29 (16-51)
Maori	54	44 (33-59)
Pacific	81	55 (43-68)
European/Other*	192	15 (13-17)

Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 21: Age-standardised mortality rate for stroke (per 100,000) across the Auckland region by prioritised ethnicity among males and females combined aged 35-74 years, 2006-2008



Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

8.2 Hospitalisations for Cardiovascular Disease

8.2.1 Cardiovascular Disease Hospitalisations Overall

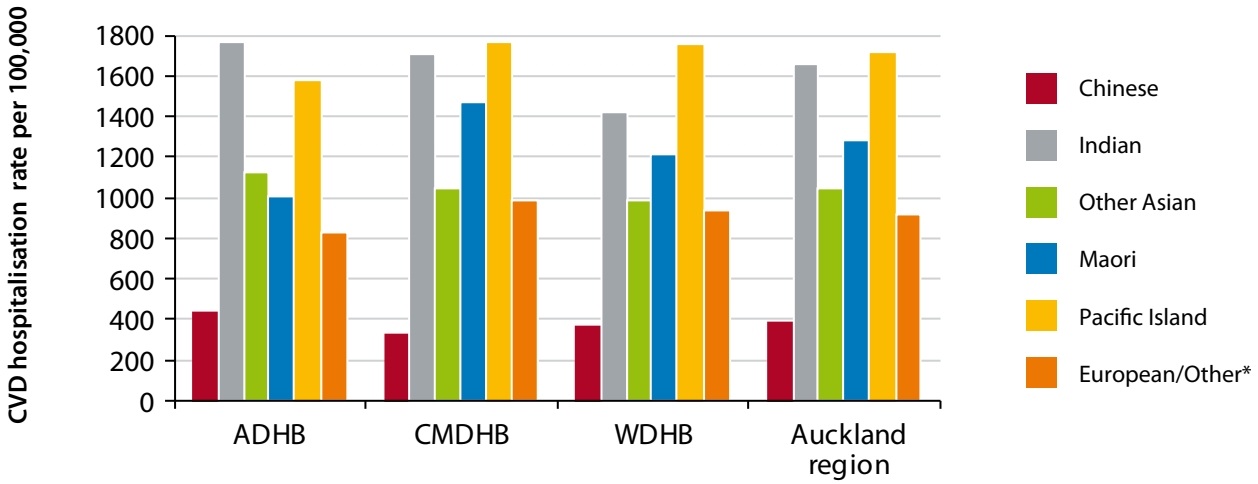
Table 20 and Figure 22 present the hospitalisation rates for cardiovascular disease among Auckland men. Indian men had the highest hospitalisation rate in ADHB, and the second highest rates after Pacific men in CMDHB, WDHB and across the Auckland region but the differences between Indian and Pacific men were not significant in any of the areas examined. Indian men in all three DHBs and across Auckland had much higher hospitalisation rates compared to European/Other men, and these were significant differences. Other Asian men had higher hospitalisation rates than European/Other men in all DHBs, but none of these differences were significant. Chinese men had the lowest hospitalisation rates of all the ethnic groups examined.

Table 20: Age-standardised hospitalisation rate for cardiovascular disease† (per 100,000 with 95% CI) by prioritised ethnicity and sex among people aged 35-74 years, 2008-2010

Sex	Ethnicity	DHB			
		ADHB	CMDHB	WDHB	Auckland region
Male	Chinese	432 (341-524)	328 (243-413)	365 (266-464)	379 (326-432)
	Indian	1765 (1469-2061)	1706 (1453-1959)	1420 (1108-1732)	1657 (1493-1821)
	Other Asian	1124 (816-1432)	1043 (688-1397)	983 (670-1296)	1049 (858-1241)
	Maori	1001 (797-1205)	1468 (1296-1639)	1211 (998-1425)	1277 (1164-1389)
	Pacific	1576 (1357-1796)	1770 (1602-1938)	1759 (1462-2055)	1714 (1592-1835)
	European/Other*	830 (779-881)	987 (929-1045)	933 (890-977)	918 (889-947)
Female	Chinese	220 (157-282)	141 (87-195)	270 (185-356)	210 (171-249)
	Indian	542 (400-685)	795 (593-956)	592 (390-793)	655 (552-758)
	Other Asian	274 (139-409)	350 (209-491)	349 (216-481)	329 (250-408)
	Maori	871 (703-1038)	1152 (1005-1299)	840 (675-1004)	995 (902-1088)
	Pacific	785 (653-916)	874 (771-977)	951 (771-1130)	864 (790-938)
	European/Other*	351 (318-385)	428 (390-466)	390 (363-416)	390 (372-408)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
†Cardiovascular disease includes patients with hospital admissions for coronary heart disease, stroke, peripheral vascular disease and coronary procedures

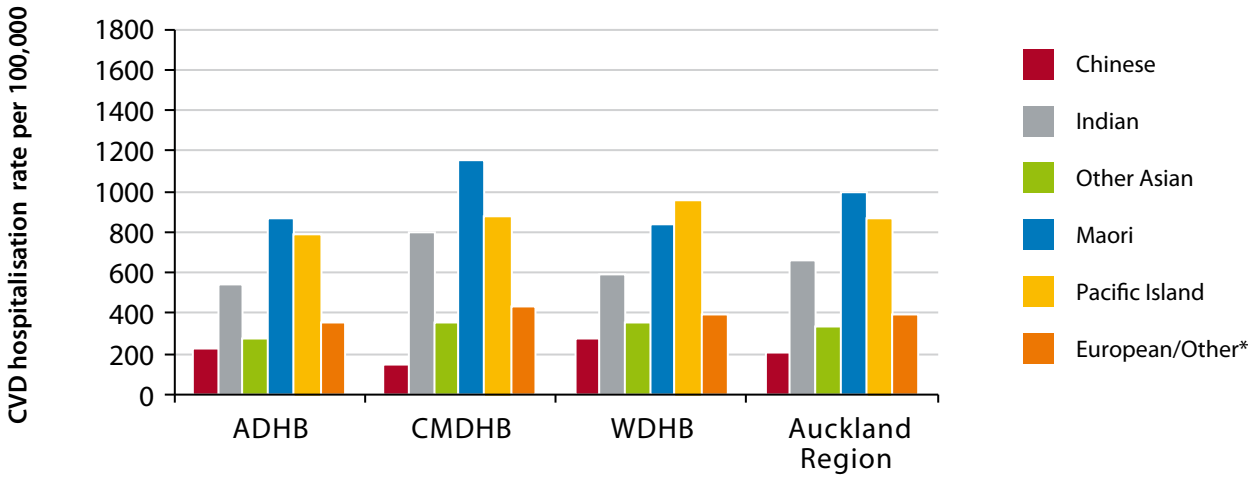
Figure 22: Age-standardised hospitalisation rate for cardiovascular disease (per 100,000) by prioritised ethnicity among MALES aged 35-74 years, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
†Cardiovascular disease includes patients with hospital admissions for coronary heart disease, stroke, peripheral vascular disease and coronary procedures

Table 20 and Figure 23 indicate that the higher hospitalisation rates from cardiovascular disease among Indian women aged 35 to 74 years as compared to their European/Other counterparts were significant in all areas except WDHB. Cardiovascular disease hospitalisation rates were lower among Indian women as compared to Maori and Pacific women, and these differences were significant between Indian and Pacific women across the Auckland region, and between Indian and Maori women in all areas examined except WDHB. There were no significant differences in the hospitalisation rates of Other Asian women and European/Other women in any of the areas examined, but Chinese women had significantly lower rates than European/Other women in all three DHBs.

Figure 23: Age-standardised hospitalisation rate for cardiovascular disease (per 100,000) by prioritised ethnicity among FEMALES aged 35-74 years, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
†Cardiovascular disease includes patients with hospital admissions for coronary heart disease, stroke, peripheral vascular disease and coronary procedures

8.2.2 Coronary Heart Disease Hospitalisations

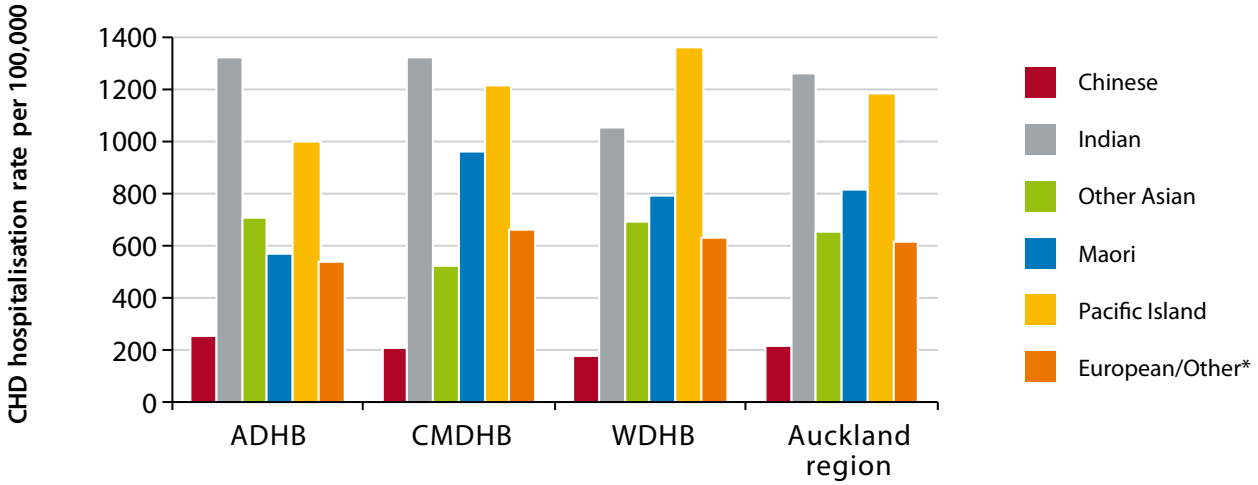
Table 21 and Figure 24 present data regarding hospitalisations for coronary heart disease among men aged 35 to 74 years across Auckland. Indian men had the highest coronary heart disease hospitalisation rate of all the ethnic groups considered in ADHB, CMDHB and across the Auckland region, with significant differences between Indian men and all other ethnic groups except Pacific men in these areas. In WDHB, Indian men had the second highest hospitalisation rate, but the differences between Indian and Pacific men (who had the highest rate) and Indian and Maori men (who had the third highest rate) were not significant. There were no significant differences between the hospitalisation rates from coronary heart disease of Other Asian and European/Other men. Chinese men had the lowest coronary heart disease hospitalisation rates.

Table 21: Age-standardised hospitalisation rate for coronary heart disease (per 100,000 with 95% CI) by prioritised ethnicity and sex among people aged 35-74 years, 2008-2010

Sex	Ethnicity	DHB			
		ADHB	CMDHB	WDHB	Auckland region
Male	Chinese	253 (182-323)	202 (135-269)	173 (110-236)	213 (174-253)
	Indian	1320 (1076-1565)	1321 (1118-1525)	1050 (804-1295)	1259 (1125-1392)
	Other Asian	702 (468-936)	524 (274-774)	687 (400-974)	652 (495-810)
	Maori	570 (421-719)	961 (825-1097)	786 (616-957)	811 (714-899)
	Pacific	1000 (823-1179)	1215 (1072-1358)	1360 (1090-1631)	1179 (1076-1282)
	European/Other*	537 (495-578)	660 (614-706)	631 (595-666)	611 (588-635)
Female	Chinese	137 (86-188)	80 (41-119)	156 (86-226)	125 (93-156)
	Indian	415 (292-538)	637 (468-806)	380 (217-544)	506 (414-598)
	Other Asian	174 (53-296)	159 (61-257)	183 (75-292)	175 (111-239)
	Maori	526 (395-658)	694 (582-806)	466 (340-593)	589 (517-660)
	Pacific	428 (331-525)	514 (433-594)	588 (443-733)	502 (445-559)
	European/Other*	190 (165-215)	254 (225-284)	252 (231-273)	236 (222-250)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

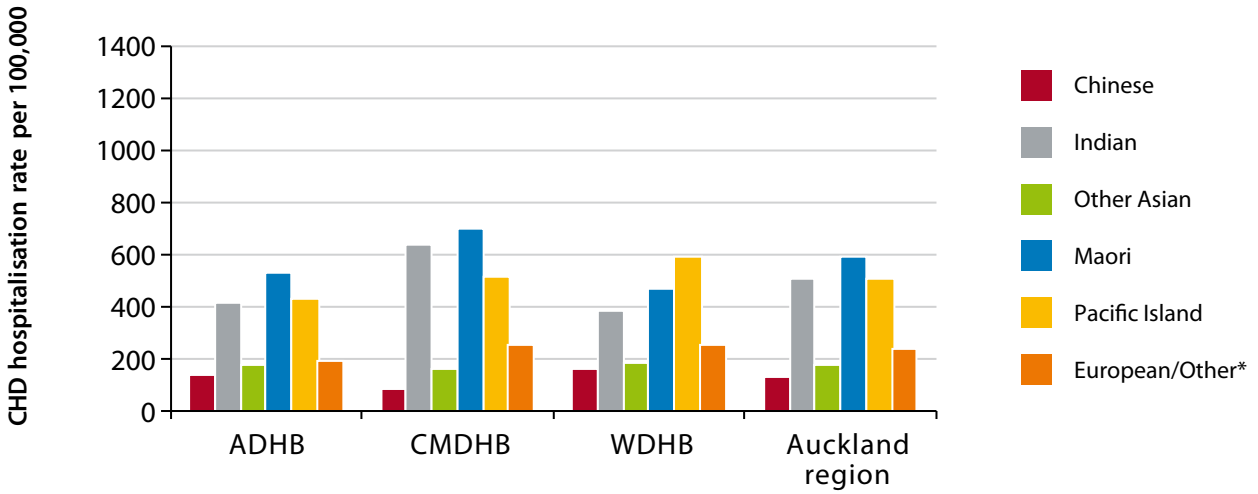
Figure 24: Age-standardised hospitalisation rate for coronary heart disease (per 100,000) by prioritised ethnicity and sex among MALES aged 35-74 years, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Table 21 and Figure 25 present the hospitalisation rates from coronary heart disease among women aged 35-74 years across Auckland. The higher hospitalisation rate of Indian women as compared to European/Other women was significant in all areas except WDHB. However, there were no significant differences between the hospitalisation rates of Indian, Maori and Pacific women. There was also no significant difference in hospitalisation rates between Other Asian and European/Other women. The lower hospitalisation rates among Chinese women as compared to European/Other women were significant in all areas except ADHB.

Figure 25: Age-standardised hospitalisation rate for coronary heart disease (per 100,000) by prioritised ethnicity and sex among FEMALES aged 35-74 years, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

8.2.3 Stroke Hospitalisations

This section presents age-standardised hospitalisation rates for stroke, excluding hospital admissions for transient ischaemic attacks which are considered a less objective 'soft' diagnosis.

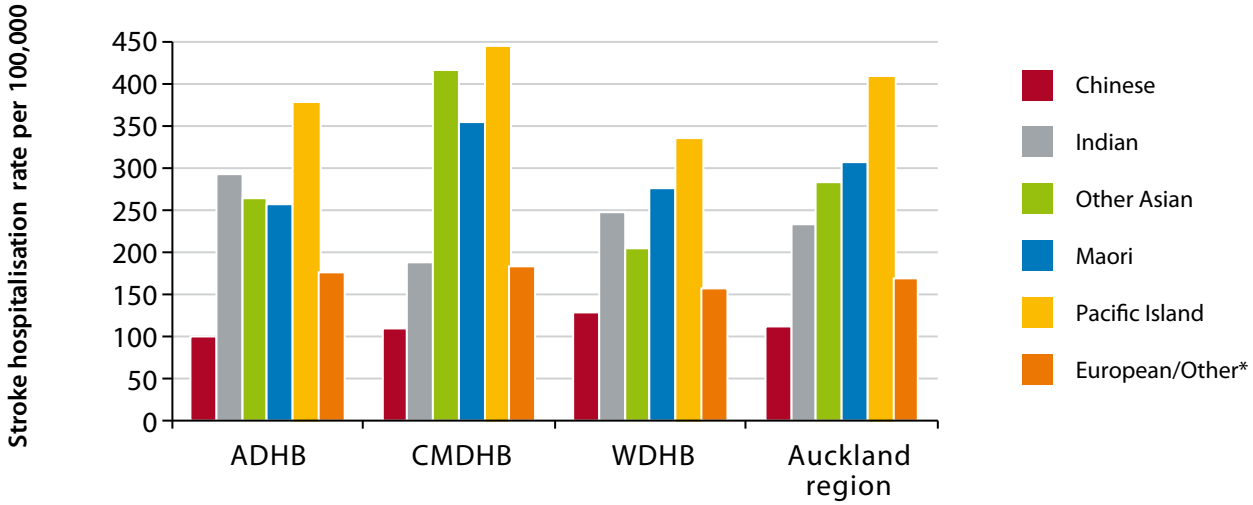
Table 22 and Figure 26 indicate that among men aged 35 to 75 years, both Indian and Other Asian men in all three DHBs and across Auckland had higher rates of hospitalisation from stroke compared to European/Other men. Of these comparisons, only the differences between Other Asian and European/Other men in CMDHB and across Auckland were significant. Chinese men had significantly lower stroke hospitalisation rates than European/Other men in all areas examined except for WDHB.

Table 22: Age-standardised hospitalisation rate for stroke (per 100,000 with 95% CI) by prioritised ethnicity and sex among people aged 35-74 years, 2008-2010

Sex	Ethnicity	DHB			
		ADHB	CMDHB	WDHB	Auckland region
Male	Chinese	100 (62-138)	109 (60-157)	128 (75-181)	111 (84-137)
	Indian	292 (169-415)	188 (125-252)	247 (116-378)	233 (176-290)
	Other Asian	263 (122-405)	416 (227-605)	205 (108-302)	283 (202-363)
	Maori	256 (159-353)	353 (268-438)	276 (177-374)	307 (253-261)
	Pacific	377 (286-471)	445 (373-517)	336 (229-463)	409 (358-459)
	European/Other*	175 (154-196)	182 (159-204)	156 (141-172)	168 (157-179)
Female	Chinese	76 (42-111)	53 (24-84)	110 (63-157)	79 (57-100)
	Indian	93 (36-150)	110 (54-167)	178 (73-284)	118 (79-155)
	Other Asian	95 (36-153)	140 (59-221)	154 (80-228)	134 (91-177)
	Maori	296 (204-388)	369 (297-440)	331 (237-424)	340 (291-389)
	Pacific	286 (211-360)	332 (275-389)	338 (238-438)	322 (280-363)
	European/Other*	99 (83-114)	99 (83-115)	94 (82-106)	96 (88-105)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

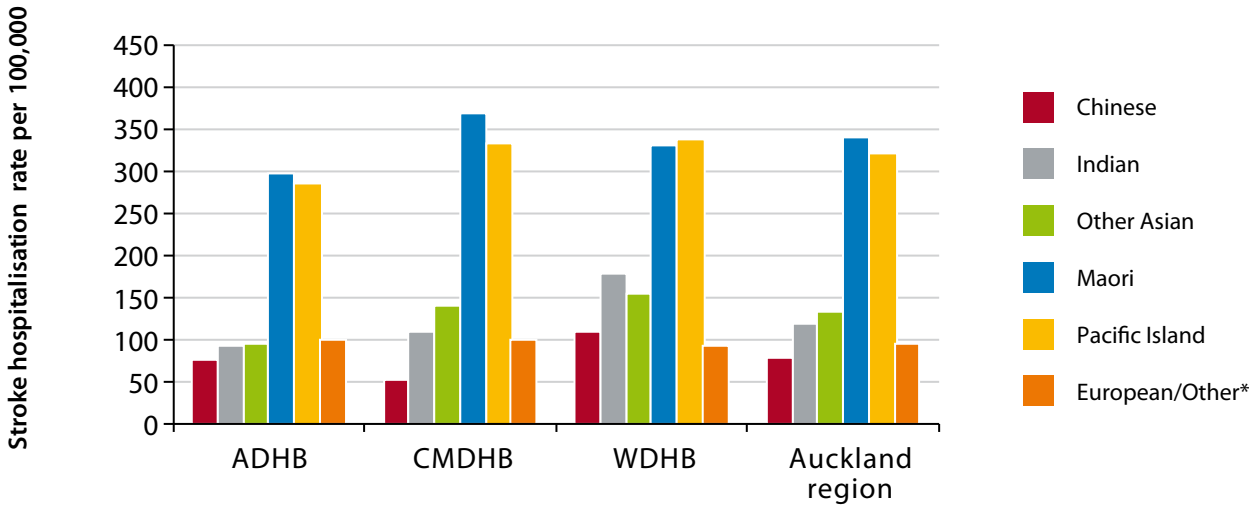
Figure 26: Age-standardised hospitalisation rate for stroke (per 100,000) by prioritised ethnicity and sex among MALES aged 35-74 years, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Although higher hospitalisation rates for stroke were noted among Indian and Other Asian women aged 35 to 74 years as compared to their European/Other counterparts, none of the differences in the hospitalisation rates of women from any of the three Asian groups and European/Other women were significant. (Table 22 and Figure 27) The hospitalisation rates of Indian and Other Asian women were significantly lower than the hospitalisation rates of Maori and Pacific women, with the exception of the differences in WDHB between Indian and Maori women and Indian and Pacific women. There were no significant differences in the hospitalisation rates of Other Asian and European/Other women, and of Chinese and European/Other women.

Figure 27: Age-standardised hospitalisation rate for stroke (per 100,000) by prioritised ethnicity and sex among FEMALES aged 35-74 years, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

8.3 Coronary Procedures

8.3.1 Hospitalisations from Coronary Procedures Overall

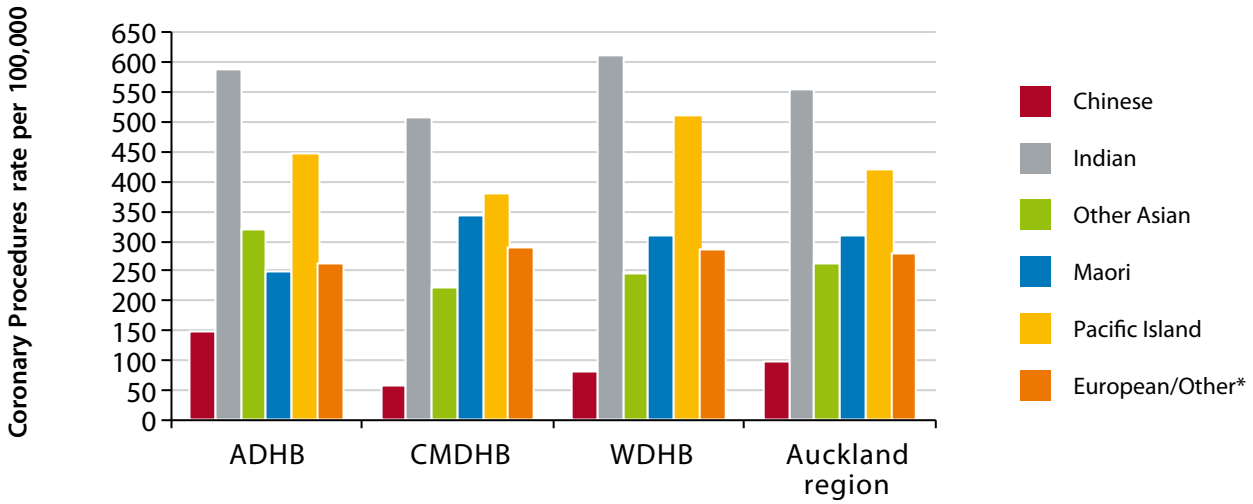
Table 23 and Figure 28 present the rate of coronary procedures among men across Auckland aged 35 to 74 years. Indian men in all three DHBs had the highest rate of coronary procedures of all the ethnic groups examined, and the differences between Indian men and men from all other ethnic groups were significant when the whole Auckland region was considered. In all areas, there were no significant differences between Other Asian and European/Other men, but Chinese men had significantly lower rates than European/Other men.

Table 23: Age-standardised hospitalisation rate for coronary procedures (per 100,000 with 95% CI) by prioritised ethnicity and sex among people aged 35-74 years, 2008-2010

Sex	Ethnicity	DHB			
		ADHB	CMDHB	WDHB	Auckland region
Male	Chinese	147 (98-196)	56 (25-86)	79 (33-126)	98 (73-123)
	Indian	587 (458-716)	507 (402-613)	610 (424-796)	554 (479-629)
	Other Asian	318 (170-465)	223 (102-344)	245 (141-349)	260 (190-330)
	Maori	248 (166-331)	341 (267-414)	310 (221-398)	309 (261-356)
	Pacific	443 (348-538)	375 (316-435)	508 (375-642)	416 (368-464)
	European/Other*	262 (236-288)	288 (261-315)	285 (264-306)	279 (265-293)
Female	Chinese	27 (8-46)	22 (2-41)	46 (17-75)	30 (18-43)
	Indian	195 (113-276)	153 (93-213)	127 (32-222)	166 (121-212)
	Other Asian	68 (10-125)	70 (11-129)	21 (0-48)	50 (23-76)
	Maori	142 (76-208)	145 (100-190)	130 (73-187)	141 (109-172)
	Pacific	143 (92-195)	101 (71-130)	119 (64-174)	116 (92-140)
	European/Other*	63 (51-75)	64 (52-76)	73 (63-83)	68 (61-75)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

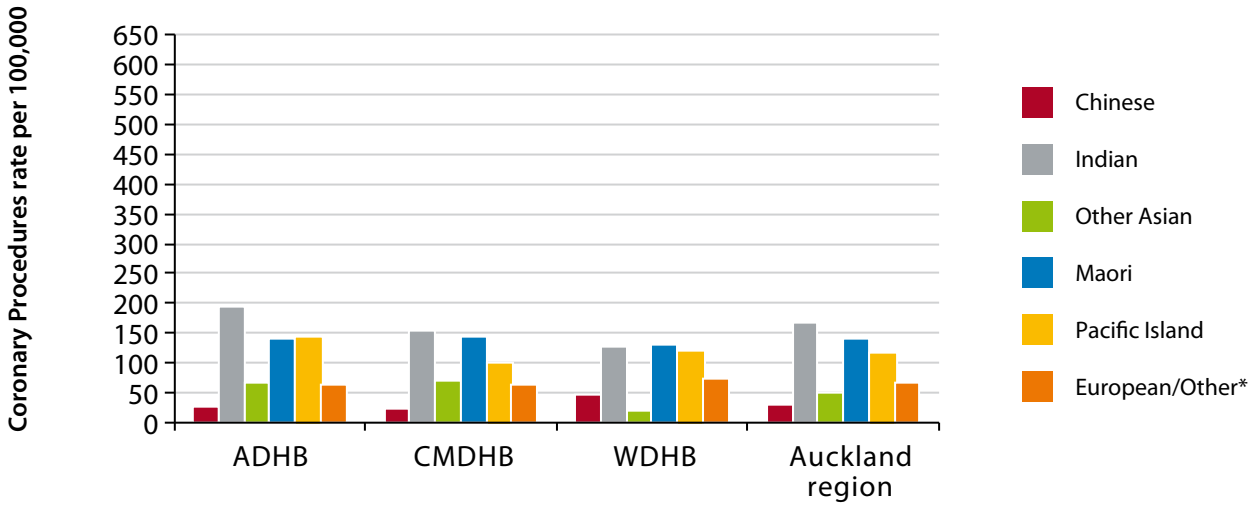
Figure 28: Age-standardised hospitalisation rate for coronary procedures (per 100,000) by prioritised ethnicity and sex among MALES aged 35-74 years, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Table 23 and Figure 29 present data regarding coronary procedures among women aged 35 to 74 years from across Auckland. Indian women in all areas except WDHB had a significantly higher rate of coronary procedures as compared to European/Other women, but there were no significant differences between rates among Indian, Maori and Pacific women. There were also no significant differences in the coronary procedure rates of Other Asian and European/Other women, except in WDHB where Other Asian women had a significantly lower rate. Chinese women had the lowest coronary procedure rates of all the ethnic groups examined, with significantly lower rates as compared to European/Other women in all areas except WDHB.

Figure 29: Age-standardised hospitalisation rate for coronary procedures (per 100,000) by prioritised ethnicity and sex among FEMALES aged 35-74 years, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

8.3.2 'Door to Catheter' Time

The Northern Regional Cardiac Network has identified receipt of coronary angiography within 72 hours by patients with acute coronary syndrome (ACS) as a monitoring priority. CMDHB is the only DHB in the Auckland region that currently collects 'door to catheter' data, as part of the Acute PREDICT project. This is a multidisciplinary initiative based in the coronary care unit to ensure that patients with ACS receive appropriate evidence-based secondary prevention management.[50] Acute PREDICT will be implemented in ADHB and WDHB in the future. Table 24 presents CMDHB data for patients with ACS in the first six months of 2011 who received timely coronary angiography.

Table 24: Number and percentage of CMDHB males and females combined with acute coronary syndrome who received coronary angiography within 72 hours by prioritised ethnicity, all ages, 1 January 2011 to 30 June 2011

Ethnicity	Number receiving CA within 72 hours	Total number of ACS patients	% receiving CA within 72 hours
Chinese	7	7	100%
Indian	29	41	71%
Other Asian	3	4	75%
Maori	16	27	59%
Pacific	36	67	53%
European/Other*	99	141	70%

Source: Acute PREDICT, CMDHB; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
CA: Coronary angiography

Small numbers of Chinese and Other Asian individuals had ACS during the first six months of 2011. A similar proportion of Indian and Other Asian ACS patients received coronary angiography within 72 hours as compared to European/Other patients. All Chinese ACS patients received timely angiography.

8.4 Congestive Heart Failure

Table 25 and Figure 30 present the hospitalisation rates for congestive heart failure among men aged 35 to 74 years across Auckland.

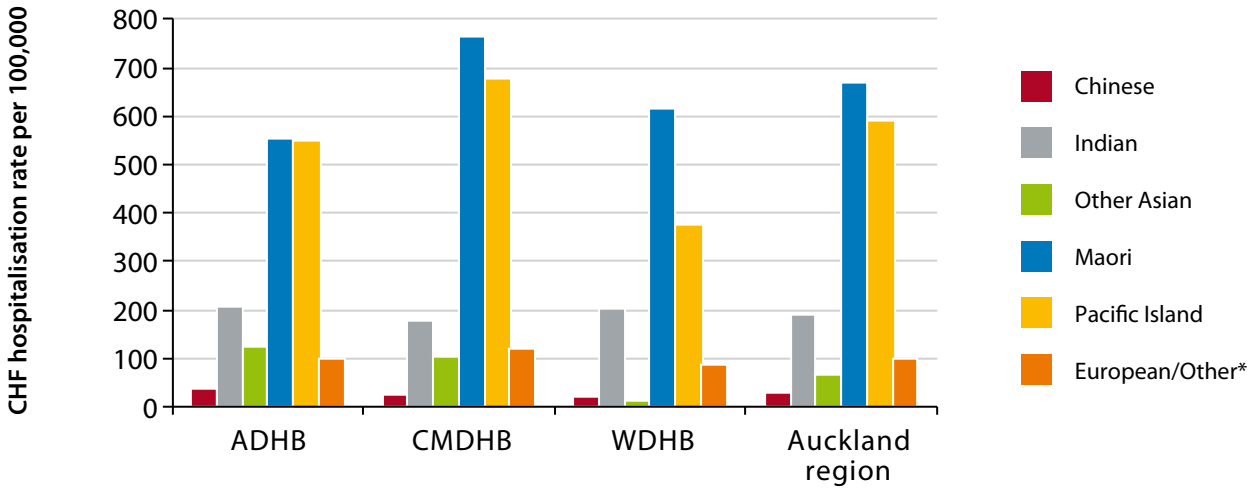
Table 25: Age-standardised hospitalisation rate for congestive heart failure (per 100,000 with 95% CI) by prioritised ethnicity and sex among people aged 35-74 years, 2008-2010

Sex	Ethnicity	DHB			
		ADHB	CMDHB	WDHB	Auckland region
Male	Chinese	35 (11-60)	25 (5-46)	22 (0-57)	28 (13-43)
	Indian	205 (90-320)	176 (95-257)	202 (42-362)	191 (128-254)
	Other Asian	122 (20-225)	103 (0-236)	13 (0-28)	66 (22-111)
	Maori	554 (383-724)	766 (590-943)	617 (272-961)	667 (533-800)
	Pacific	550 (396-705)	679 (555-802)	375 (241-509)	591 (507-675)
	European/Other*	101 (80-121)	118 (96-140)	87 (71-102)	99 (88-110)
Female	Chinese	3 (0-10)	13 (0-32)	5 (0-14)	7 (0-14)
	Indian	107 (8-207)	218 (113-324)	121 (0-241)	156 (94-218)
	Other Asian	77 (0-161)	50 (3-98)	13 (0-42)	43 (15-72)
	Maori	279 (161-397)	546 (437-655)	287 (167-407)	406 (338-475)
	Pacific	286 (193-379)	426 (339-513)	263 (166-359)	354 (299-410)
	European/Other*	54 (40-69)	57 (39-75)	46 (37-55)	51 (44-59)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

The higher hospitalisation rates for congestive heart failure among Indian men as compared to European/Other men were significant when the whole Auckland region was considered. Indian men had significantly lower rates than Maori and Pacific men in ADHB, CMDHB and across the Auckland region. There were no significant differences between the congestive heart failure hospitalisation rates of Other Asian men and European/Other men, except for WDHB where Other Asian men had a significantly lower rate. Chinese men had significantly lower hospitalisation rates than European/Other men across all areas.

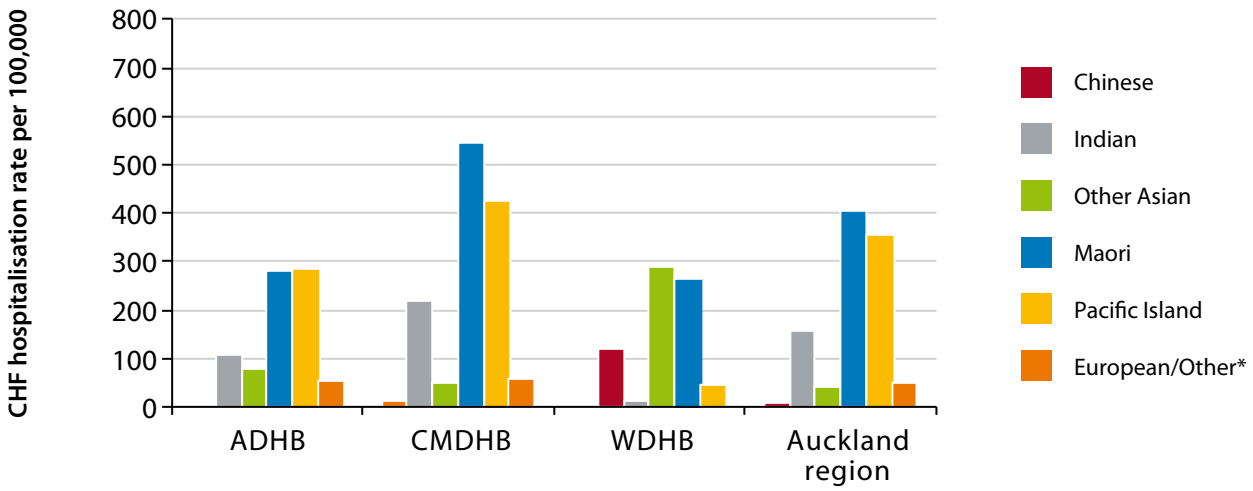
Figure 30: Age-standardised hospitalisation rate for congestive heart failure (per 100,000) by prioritised ethnicity and sex among MALES aged 35-74 years, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Table 25 and Figure 31 present the congestive heart failure hospitalisation rates among women aged 35 to 74 years across Auckland. Rates among women were lower among all ethnic groups as compared to men. Indian women had higher congestive heart failure hospitalisation rates than European/Other women and lower rates than Maori and Pacific women, and these differences were significant in CMDHB and across the Auckland region. In all areas, Chinese women had significantly lower rates than European/Other women, but there were no significant differences between Other Asian women and European/Other women.

Figure 31: Age-standardised hospitalisation rate for congestive heart failure (per 100,000) by prioritised ethnicity and sex among FEMALES aged 35-74 years, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

8.5 Pharmacotherapy

The New Zealand CVD risk management guidelines recommend that blood pressure-lowering, lipid-lowering medications and aspirin should be considered for all people with cardiovascular disease.[51]

Table 26 presents data regarding the number and percentage of people aged 30 to 80 years with CVD in the Auckland region who were dispensed these medications during the 2010/2011 financial year. All patients hospitalised with a CVD event between 01/07/2000 and 30/06/2010 and who had a health contact in the Auckland region between 01/07/2008 and 30/06/2010 were included. The numerator included all patients dispensed the medication(s) in question in at least three of the four quarters examined. Data is presented separately for Indian people, but unfortunately was not available separately for Chinese and Other Asian people.

Indians had the greatest proportion of people dispensed pharmacotherapy across all the medication categories considered, with the exception of anti-platelet/anti-coagulant use in CMDHB (where the proportion of Indian people dispensed medications was the same as for European/Others) and WDHB (where a slightly lower proportion of Indian people were dispensed medications as compared to European/Others).

A lower proportion of Chinese and Other Asian people (who were considered together) were dispensed medications as compared to European/Other people, irrespective of the type of medication in question.

Table 26: Medication Dispensing between 1 July 2010 and 30 June 2011 to males and females combined aged 30-80 years with CVD† by prioritised ethnicity

Medication	Ethnicity	ADHB		CMDHB		WDHB		Auckland region	
		No.	%‡	No.	%‡	No.	%‡	No.	%‡
Statins alone	Chinese/Other Asian	342	62%	253	64%	274	62%	869	63%
	Indian	390	70%	437	74%	209	72%	1,036	72%
	Maori	336	55%	818	59%	440	59%	1,594	58%
	Pacific	699	64%	1,296	64%	433	59%	2,428	63%
	European/Other*	2,836	66%	3,607	69%	5,514	67%	11,957	67%
Blood pressure lowering medications alone	Chinese/Other Asian	359	65%	275	65%	298	67%	932	67%
	Indian	410	73%	451	73%	222	77%	1,083	75%
	Maori	397	65%	922	65%	503	67%	1,822	66%
	Pacific	769	70%	1,424	70%	494	67%	2,687	70%
	European/Other*	3,091	72%	3,876	72%	6,110	74%	13,077	74%
Anti-platelet/ anti-coagulants alone	Chinese/Other Asian	332	60%	251	63%	265	60%	848	61%
	Indian	381	68%	430	72%	198	68%	1,009	70%
	Maori	375	61%	884	64%	477	64%	1,736	63%
	Pacific	720	66%	1,326	65%	463	63%	2,509	65%
	European/Other*	2,869	67%	3,774	72%	5,750	70%	12,393	70%
Use of all three	Chinese/Other Asian	266	48%	197	50%	219	50%	682	49%
	Indian	339	61%	382	64%	174	60%	895	62%
	Maori	276	45%	706	51%	367	49%	1,349	49%
	Pacific	579	53%	1,130	56%	365	50%	2,074	54%
	European/Other*	2,166	50%	2,924	56%	4,414	54%	9,504	54%

Source: Regional Decision Support Team, Northern DHB Support Agency; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
†The denominator includes all patients hospitalised with a CVD event between 01/07/2000 and 30/06/2010 and who had a health contact in the Auckland Region between 01/07/2008 and 30/06/2010.
‡The percentages presented are the percentage of patients dispensed the medication(s) in question in at least three of the four quarters between 1/07/2010 and 30/06/2011

8.6 Summary of Cardiovascular Disease

Avoidable Mortality from Cardiovascular Disease

For cardiovascular disease overall as well as coronary heart disease and stroke separately, Indian men across the Auckland region aged 35 to 74 years had higher mortality rates (and these were significant differences) as compared to their European/Other counterparts and lower mortality rates from cardiovascular disease than Maori and Pacific men aged 35 to 74 years. There were few significant differences between the rates of Other Asian men and European/Other men in this age group. Chinese men generally had the lowest mortality rates of all the ethnic groups examined.

Similar trends were noted among women aged 35 to 74 years across Auckland, although the overall mortality rates of women were lower as compared to men for each of the ethnic groups examined.

Hospitalisations for Cardiovascular Disease

For cardiovascular disease overall as well as coronary heart disease and stroke separately, Indian men aged 35 to 74 years generally had much higher hospitalisation rates as compared to their European/Other counterparts (and these were significant differences) and higher rates as compared to Maori men. However, hospitalisation rates among Indian men were mostly lower than among Pacific men, although these differences were usually not significant. As compared to European/Other men, Other Asian men had higher hospitalisation rates from cardiovascular disease overall (not significant) and from stroke (significantly higher rates) but similar rates of coronary heart disease admissions. Chinese men generally had lower hospitalisation rates as compared to European/Other men.

Indian women aged 35 to 74 years generally had higher hospitalisation rates for cardiovascular disease, coronary heart disease and stroke as compared to European/Other women, and these differences were significant in most areas considered for CVD overall and for coronary heart disease. Compared to Maori and Pacific women, however, Indian women had generally lower rates of admissions from cardiovascular disease overall and stroke and similar rates for coronary heart disease. There were few significant differences in the hospitalisation rates of Other Asian and European/Other women for each type of cardiovascular disease examined. As compared to European/other women, Chinese women had similar stroke hospitalisations rates and lower rates of admissions from cardiovascular disease overall and from coronary heart disease.

Coronary Procedures

Indian men had the highest rate of coronary procedures of all the ethnic groups examined, and these differences were significant when the whole Auckland region was considered. In all areas, there were no significant differences between Other Asian and European/Other men, but Chinese men had significantly lower rates than European/Other men.

Indian women generally had significantly higher rates of coronary procedures as compared to European/Other women but there were no significant differences between rates among Indian, Maori and Pacific women. There were few significant differences in the coronary procedure rates of Other Asian and European/Other women, and Chinese women had the lowest coronary procedure rates of all the ethnic groups examined.

CMDHB is the only DHB in the Auckland region that currently collects 'door to catheter' data in Auckland. During the first six months of 2011, small numbers of Chinese and Other Asian individuals had acute coronary syndrome (ACS). A similar proportion of Indian and Other Asian ACS patients received coronary angiography within 72 hours as compared to European/Other patients. All Chinese ACS patients received timely angiography.

Congestive Heart Failure

Among both men and women, the hospitalisation rates for congestive heart failure among Indians were higher as compared to European/Other men and women but lower than Maori and Pacific people and these differences were significant when the whole Auckland region was considered. There were few significant differences between the congestive heart failure hospitalisation rates of Other Asian men and women and European/Other men and women. Chinese men and women had significantly lower hospitalisation rates than European/Other men and women across all areas.

Pharmacotherapy

Indians had the greatest proportion of people dispensed pharmacotherapy across all the medication categories considered, with the exception of anti-platelet/anti-coagulant use in CMDHB and WDHB. A lower proportion of Chinese and Other Asian people (who were considered together) were dispensed medications as compared to European/Other people, irrespective of the type of medication.

9. Diabetes

This section presents the following data regarding diabetes among Asian people in Auckland:

- Diabetes prevalence
- Mortality from diabetes
- Hospitalisations from diabetes
- Get Checked Diabetes.

Diabetes data for the Asian ethnic groups has been compared to data for Maori, Pacific people and European/Other people, as Maori and Pacific groups are considered to be at high risk for diabetes. Data have been restricted to adults aged between 15 to 74 years, as co-morbidities may affect morbidity and mortality rates above 75 years. All hospitalisation data pertain to publically-funded service provision.

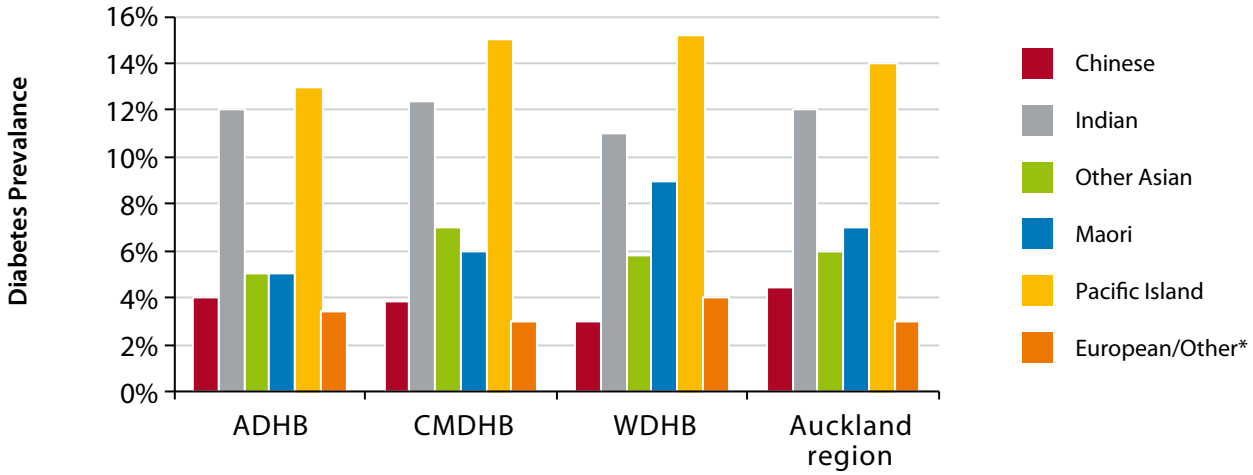
9.1 Diabetes Prevalence

Data regarding the prevalence of diabetes in Auckland at 31 December 2010 was obtained from the Virtual Diabetes Registry established by the Ministry of Health. Please refer to Appendix 4 for the methodology used to construct this registry.

9.1.1 Diabetes Prevalence by DHB

Figure 32 presents data regarding the age-standardised prevalence of diabetes for people aged 15 to 74 years in each DHB and across the Auckland region. With the exception of Chinese people in WDHB, people from all three Asian groups had a higher prevalence of diabetes at 31 December 2010 as compared to European/Other people in all areas examined. Around 11-12% of Auckland Indian people had diabetes, and this represented the second highest prevalence of diabetes in each area examined, after Pacific people. Other Asian people had a similar or higher prevalence of diabetes as compared to Maori people in ADHB and CMDHB, but a lower comparative prevalence in WDHB and across the Auckland region. Chinese people in each area examined had the lowest prevalence of diabetes of the three Asian groups.

Figure 32: Age-standardised diabetes prevalence by prioritised ethnicity among males and females combined aged 15-74 years at 31 December 2010



Source: Ministry of Health; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

9.1.2 Diabetes Prevalence by Age-group

Figure 33 and Figure 34 present the prevalence of diabetes by age-group at 31 December 2010, across the Auckland region as a whole, for men and women respectively. The significance of trends for older age groups, particularly from 75 years onwards, is unclear given the high numbers of deaths (and resultant reduction in the number of diabetic patients) within these age groups.

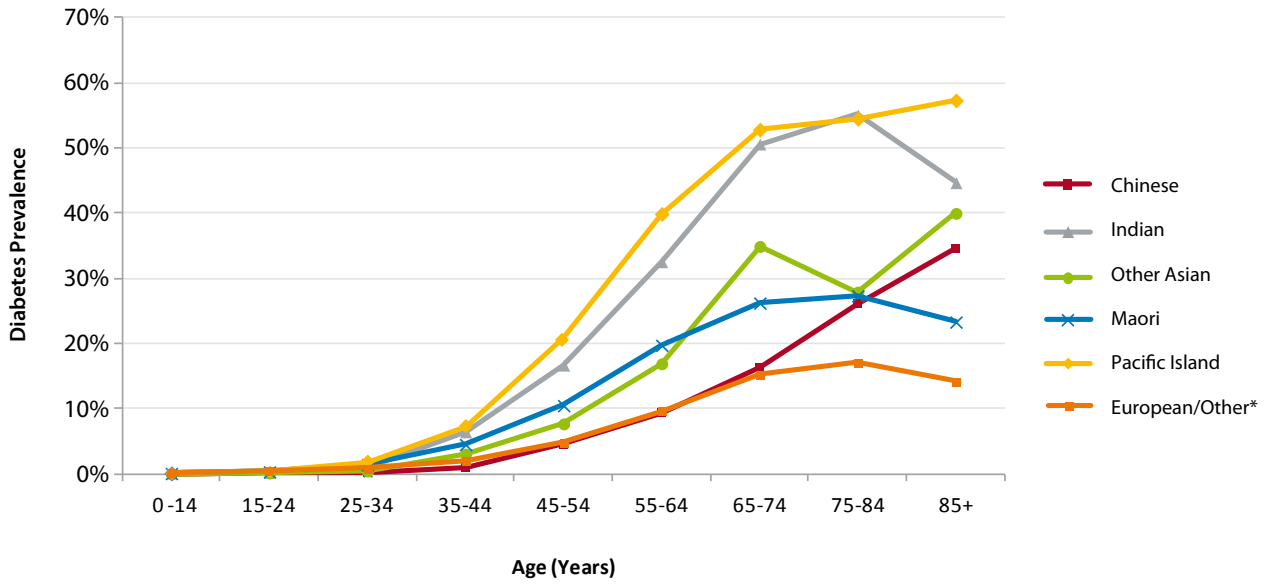
Indian men had a markedly higher prevalence of diabetes as compared to all other ethnic groups except Pacific men from 35 years of age onwards. Other Asian men had a much higher prevalence of diabetes as compared to European/Other men after 35 years of age, and a higher prevalence than Maori men from 65 years of age onwards. Chinese men had a similar prevalence of diabetes to European/Other men at each age group until 75 years of age when the prevalence of diabetes among Chinese men rose more sharply than among their European/Other counterparts.

As compared to European/Other women, a markedly higher prevalence of diabetes was observed among Indian and Other Asian women from age 35 years onwards and among Chinese women from age 55 years onwards. The prevalence of diabetes among Indian women at each age group was second only to Pacific women until 85 years of age, when Indian women had the highest prevalence of diabetes of all the ethnic groups examined.

The following trends were noted when the age-specific prevalence rates for men and women were compared within each Asian ethnic sub-group:

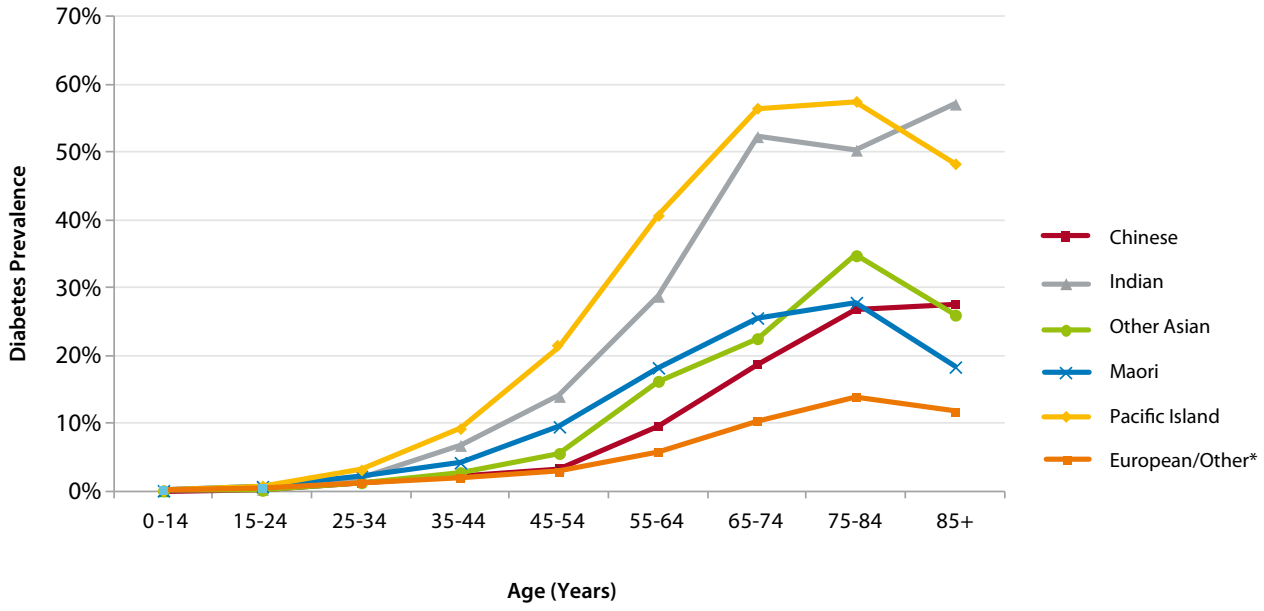
- Indian men and women had a similar prevalence of diabetes until 75 years of age
- The age-specific prevalence of diabetes was similar among Other Asian men and women until 65 years of age, when the prevalence of diabetes rose sharply among Other Asian men as compared to Other Asian women
- Chinese men and women had a similar prevalence of diabetes until 85 years of age, when a higher prevalence was noted among Chinese men.

Figure 33: Diabetes prevalence across the Auckland region by prioritised ethnicity and age among MALES at 31 December 2010



Source: Ministry of Health; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 34: Diabetes prevalence across the Auckland region by prioritised ethnicity and age among FEMALES at 31 December 2010



Source: Ministry of Health; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

9.2 Mortality from Diabetes

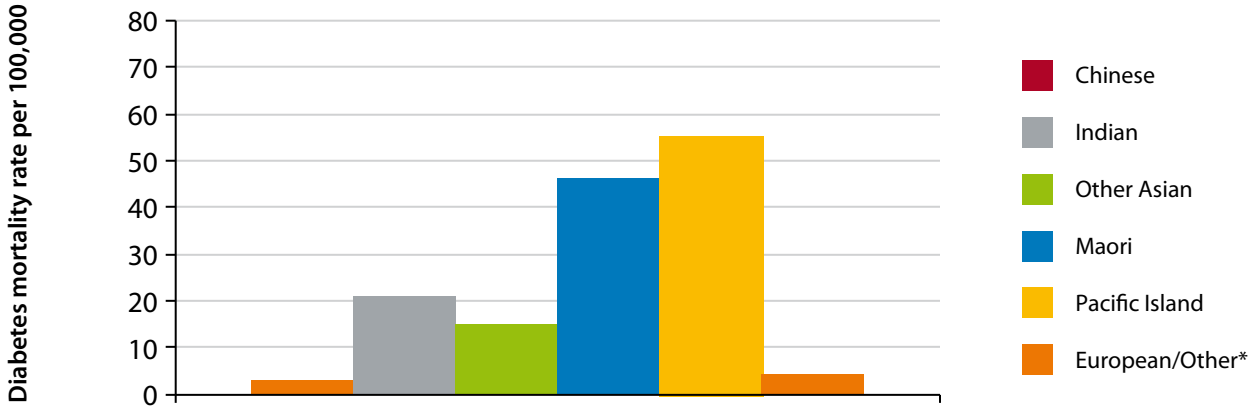
Table 27 and Figure 35 present the mortality rates for diabetes among Auckland people between 2006 and 2008. Data have not been disaggregated by DHB or by sex because the number of deaths from diabetes among the Asian groups examined was relatively small.

Indian people across Auckland had significantly higher mortality rates from diabetes as compared to their European/Other counterparts, but significantly lower rates as compared to Maori and Pacific peoples. Other Asian people also had significantly higher diabetes mortality rates as compared to European/Other, while rates among Chinese and European/Other people were similar.

Table 27: Age-standardised mortality rate for diabetes† (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity among males and females combined aged 15-74 years, 2006-2008

Ethnicity	Number	Rate per 100,000 (95%CI)
Chinese	6	3 (1-6)
Indian	27	21 (14-31)
Other Asian	11	15 (7-27)
Maori	95	46 (37-56)
Pacific	148	55 (46-64)
European/Other*	196	4 (3-5)

Figure 35: Age-standardised mortality rate for diabetes† (per 100,000) across the Auckland region by prioritised ethnicity among males and females combined aged 15-74 years, 2006-2008



Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
†Diabetes was the primary cause of death

9.3 Hospitalisations for Diabetes

9.3.1 Overall Hospitalisations with Diabetes

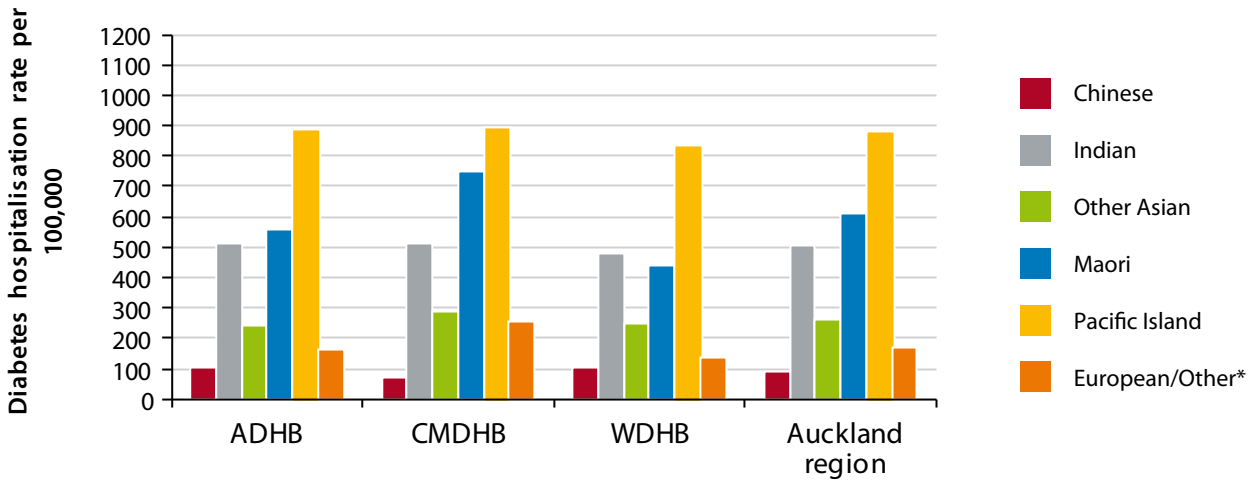
Table 28 and Figure 36 present the hospitalisation rates for diabetes among Auckland men aged 15 to 74 years of age. Indian men had the highest hospitalisation rates of the three Asian groups, with significantly higher rates as compared to European/Other men. Indian men had lower rates as compared to Pacific men, and these were significant differences in all areas examined. Indian had significantly lower rates than Maori men in CMDHB but there were no significant differences in the rates of Maori and Indian men in ADHB, WDHB and across Auckland. Other Asian men had higher rates as compared to their European/Other counterparts in all DHBs, but these differences were not significant, even when the whole of the Auckland region was considered. Chinese men had the lowest hospitalisation rates for diabetes of all the ethnic groups examined, and the difference between Chinese and European/Other men was significant in CMDHB and when the Auckland region as a whole was considered.

Table 28: Age-standardised hospitalisation rate for diabetes† (per 100,000 with 95% CI) by prioritised ethnicity and sex among people aged 15-74 years, 2008-2010

Sex	Ethnicity	DHB			
		ADHB	CMDHB	WDHB	Auckland region
Male	Chinese	101 (63-139)	69 (37-101)	103 (59-146)	91 (70-113)
	Indian	510 (385-635)	514 (400-629)	482 (321-643)	503 (429-577)
	Other Asian	239 (119-360)	287 (164-410)	249 (103-396)	261 (181-341)
	Maori	560 (398-723)	747 (633-861)	437 (328-547)	611 (538-684)
	Pacific	889 (748-1029)	891 (798-984)	832 (653-1010)	880 (809-951)
	European/Other*	161 (138-184)	253 (192-314)	138 (121-155)	172 (156-189)
Female	Chinese	121 (83-160)	95 (54-137)	87 (44-129)	103 (128-222)
	Indian	371 (280-460)	452 (357-547)	352 (225-479)	401 (343-459)
	Other Asian	184 (89-279)	195 (115-275)	159 (82-236)	175 (128-222)
	Maori	444 (325-564)	673 (568-778)	287 (212-363)	506 (444-567)
	Pacific	1116 (970-1261)	945 (857-1032)	876 (723-1030)	980 (912-1049)
	European/Other*	123 (95-150)	125 (106-144)	101 (86-117)	114 (102-126)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
†Diabetes was the primary cause of death

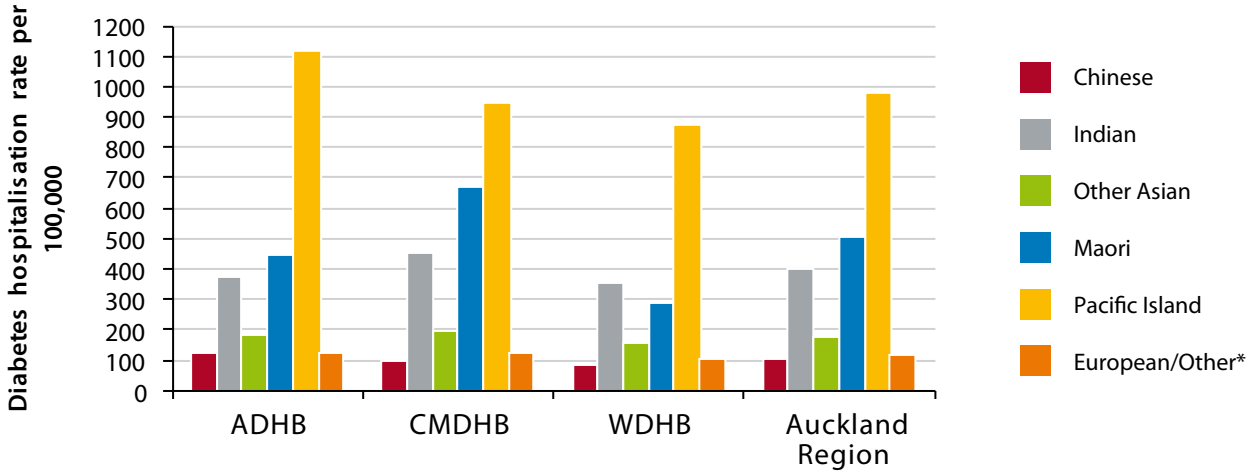
Figure 36: Age-standardised hospitalisation rate for diabetes† (per 100,000) by prioritised ethnicity among MALES aged 15-74 years, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
†Diabetes was the primary cause of death

Similar ethnic-specific trends relating to hospitalisation for diabetes were observed among women aged 15 to 74 years.(Table 26 and Figure 37) Rates among Pacific and Chinese women were generally higher than among their male counterparts, but female rates were lower as compared to male rates for the other ethnic groups.

Figure 37: Age-standardised hospitalisation rate for diabetes† (per 100,000) by prioritised ethnicity among FEMALES aged 15-74 years, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
†Diabetes was the primary cause of death

9.3.2 Hospitalisations with Complications of Diabetes

Common complications of diabetes include renal issues, diabetic neuropathy and retinopathy. Retinal screening has been a component of the annual reviews for the Get Checked Diabetes (GCD) programme. Separate records for retinal screening are not available, but data regarding GCD annual reviews are presented in the next section.

Table 29 presents age-standardised rates of hospitalisation with renal complications of diabetes and diabetic neuropathy. As the number of admissions recorded for each complication was small, data is presented for the Auckland region as a whole and for males and females combined.

For both renal complications of diabetes and diabetic neuropathy, Indians had higher rates of hospitalisations as compared to European/Other people and these differences were significant. There were no significant differences in the hospitalisation rates of Chinese, Other Asians and European/Other people for either complication of diabetes. All three Asian groups had significantly lower rates of hospitalisation for both renal diabetic complications and diabetic neuropathy as compared to Maori and Pacific peoples.

Table 29: Age-standardised rate for hospitalisation with complications of diabetes (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity among males and females combined aged 15-74 years, 2008-2010

Complications	Ethnicity	Number of admissions	Rate per 100,000 (95% CI)
Renal complications of diabetes	Chinese	66	24 (11-36)
	Indian	97	65 (39-91)
	Other Asian	15	13 (2-24)
	Maori	701	284 (238-329)
	Pacific	1,220	397 (344-451)
	European/Other*	264	11 (8-14)
Diabetic neuropathy	Chinese	13	5 (2-8)
	Indian	67	42 (30-55)
	Other Asian	14	15 (3-27)
	Maori	182	76 (61-90)
	Pacific	329	104 (89-120)
	European/Other*	166	7 (6-8)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

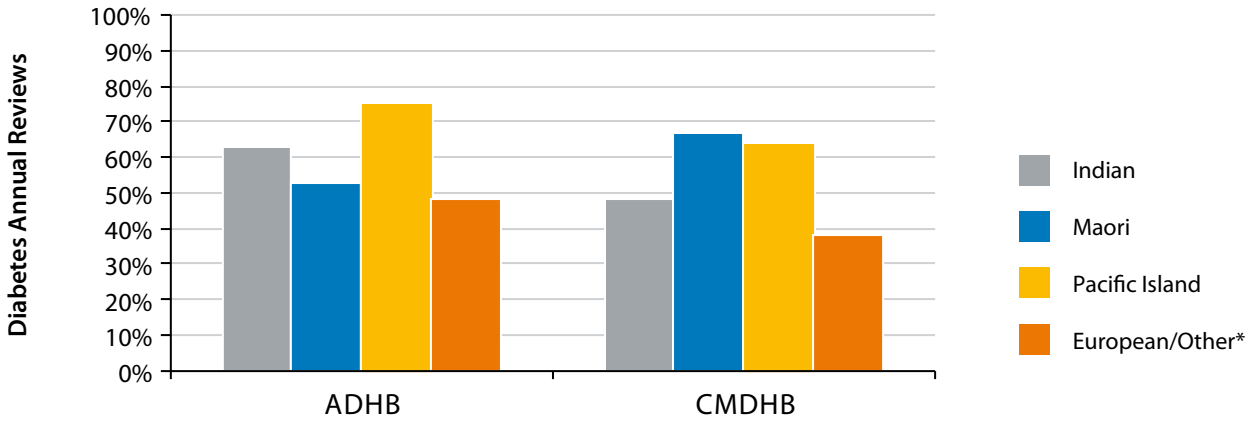
9.4 Get Checked Diabetes

Get Checked Diabetes is a programme that was commenced across New Zealand in 2000, and entitled diabetic patients to a free annual diabetes review with their general practitioner or practice nurse. At each annual assessment, the following checks or tests were completed or booked: HbA1c, blood pressure, cholesterol, height, weight, renal function, foot examination and retinal screening biennially.[52] Based on an evaluation of the efficacy of the Get Checked Programme, the programme was replaced by a Diabetes Care Improvement Package on 1 July 2012.[53]

National health targets for diabetes management required that annual review data should be collected for Maori, Pacific and non-Maori-non-Pacific peoples. In addition, ADHB and CMDHB collect data separately for Indian people. Separate ADHB and CMDHB data is not available for Chinese or Other Asian groups, or for any Asian group in WDHB.

Figure 38 indicates that a greater percentage of Indian people with diagnosed diabetes were recorded as receiving annual reviews in ADHB (63%) as compared to CMDHB (48%). In ADHB, the proportion of Indian people who were recorded as receiving annual reviews was greater as compared to Maori (53%) and European/Other (48%) people, but less than among Pacific people (75%). In CMDHB, the proportion of Indian people recorded as receiving reviews was greater than among European/Other people (38%) but less than among Maori (67%) and Pacific (64%) people.

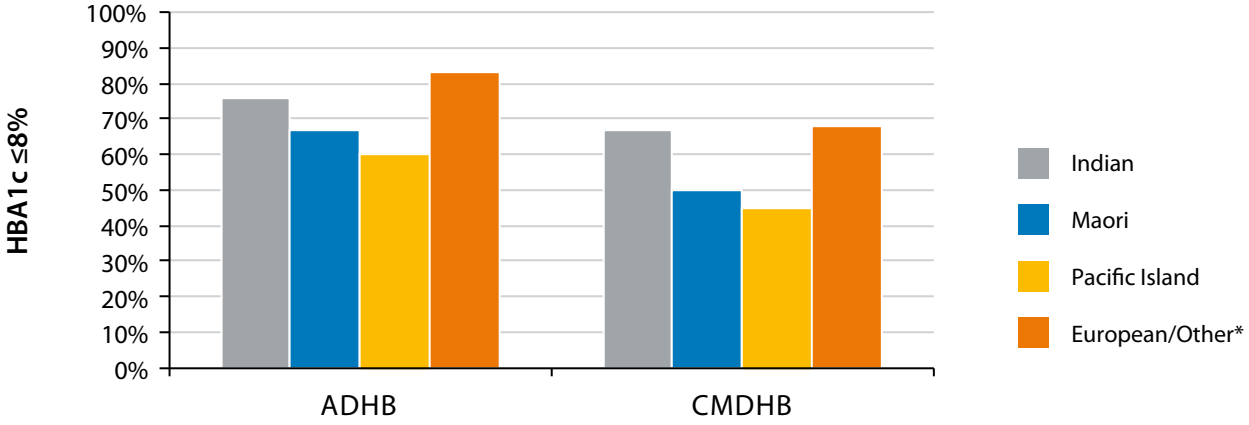
Figure 38: Percentage of males and females combined with diagnosed diabetes† recorded as receiving a Diabetes Get Checked annual review between 1 July 2010 and 30 June 2011 by prioritised ethnicity



Source: ADHB and CMDHB; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Indian peoples
†Counts of diagnosed diabetics (Ministry of Health data) as at 31 December 2010 were used

HbA1c is a form of haemoglobin that is used to identify average plasma glucose concentrations over time. The New Zealand guidelines for diabetes management indicate that an HbA1c level of 7% or less (<53mmol/L) is desirable. An HbA1c level greater than 8% (64 mmol/L) indicates sub-optimal diabetes control. Figure 39 presents the percentage of people who received a diabetes annual review with an HbA1c level less than or equal to 8%. In both ADHB and CMDHB, a higher proportion of Indian people had adequate diabetes control as compared to Maori and Pacific people. In both CMDHB and ADHB, European/Other people had the highest proportion of people with adequate diabetes control of the ethnic groups examined.

Figure 39: Percentage of males and females combined who received a Diabetes Get Checked annual review between 1 July 2010 and 30 June 2011 with HbA1c ≤ 8% by prioritised ethnicity



Source: ADHB and CMDHB; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Indian peoples

9.5 Summary of Diabetes

Diabetes Prevalence

With the exception of Chinese people in WDHB, people from all three Asian groups had a higher age-standardised prevalence of diabetes at 31 December 2010 as compared to European/Other people in each DHB and across the Auckland region. Around 11-12% of Auckland Indian people had diabetes, and this represented the second highest prevalence of diabetes in each area examined, after Pacific people.

Across the Auckland region, Indian men had a markedly higher prevalence of diabetes at 31 December 2010 as compared to all other ethnic groups except Pacific men from 35 years of age onwards. Other Asian men had a much higher prevalence of diabetes as compared to European/Other men after 35 years of age, and a higher prevalence than Maori men from 65 years of age onwards. Chinese men had a similar prevalence of diabetes to European/Other men at each age group until 75 years of age.

As compared to European/Other women, a markedly higher prevalence of diabetes was observed among Indian and Other Asian women from age 35 years onwards and among Chinese women from age 55 years onwards. The prevalence of diabetes among Indian women at each age group was second only to Pacific women until 85 years of age, when Indian women had the highest prevalence of diabetes of all the ethnic groups examined.

The significance of trends for older age groups, particularly from 75 years onwards, is unclear given the high numbers of deaths (and resultant reduction in the number of diabetic patients) within these age groups.

Mortality from Diabetes

Indian people across Auckland had significantly higher mortality rates from diabetes as compared to their European/Other counterparts, but significantly lower rates as compared to Maori and Pacific peoples. Other Asian people also had significantly higher mortality rates as compared to European/Others, while rates among Chinese and European/Other people were similar.

Hospitalisations from Diabetes

Among men aged 15 to 74 years, Indians had the highest diabetes hospitalisation rates of the three Asian groups, with significantly higher rates as compared to European/Other men. Indian men had lower rates as compared to Pacific men, and these were significant differences in all areas examined. Indian had significantly lower rates than Maori men in CMDHB but there were no significant differences in the rates of Maori and Indian men in other areas. Other Asian men had generally higher rates as compared to their European/Other counterparts in all DHBs, but these differences were not significant even when the whole of the Auckland region was considered. Chinese men had the lowest hospitalisation rates for diabetes of all the ethnic groups examined. Similar ethnic-specific trends relating to hospitalisation for diabetes were observed among women aged 15 to 74 years.

For both renal complication of diabetes and diabetic neuropathy, Indians had higher rates of hospitalisations as compared to European/Other people and these differences were significant. There were no significant differences in the hospitalisation rates of Chinese, Other Asians and European/Other people for either complication of diabetes. All three Asian groups had significantly lower rates of hospitalisation for both renal diabetic complications and diabetic neuropathy as compared to Maori and Pacific people.

Get Checked Diabetes

A greater percentage of Indian people with diagnosed diabetes received annual reviews in ADHB as compared to CMDHB. In both CMDHB and ADHB, the proportion of Indian people who received annual reviews was greater as compared to European/Other people, but less than among Pacific people. As compared to Maori people, the proportion of Indian people who received reviews was greater in ADHB but lower in CMDHB.

In both ADHB and CMDHB, a higher proportion of Indian people had adequate diabetes control (HbA1c <8% or 64mmol/L) as compared to Maori and Pacific people. In both CMDHB and ADHB, European/Other people had the highest proportion of people with adequate diabetes control of the ethnic groups examined.

10. Cancer

This section presents the following cancer data for Asian people from across Auckland:

- Mortality
- Cancer registrations
- Breast screening
- Cervical screening.

10.1 Mortality

10.1.1 Overall Cancer Mortality

Table 30 presents the overall mortality rates from cancer across the Auckland region by prioritised ethnicity and sex between 2006 and 2008. Among both men and women, Other Asian people had the highest cancer mortality rates of the Asian groups examined. Chinese and Indian people had significantly lower cancer mortality rates than European/Others, and while Other Asian men and women also had lower rates than European/Other men and women, these differences were not significant.

Table 30: Age-standardised overall mortality rate from cancer (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity and sex among people aged 15 years or older, 2006-2008

Sex	Ethnicity	Number	Rate per 100,000 (95%CI)
Male	Chinese	96	110 (87-140)
	Indian	38	70 (47-104)
	Other Asian	53	171 (122-235)
	European/Other*	2,557	187 (180-195)
Female	Chinese	68	62 (48-79)
	Indian	38	67 (46-96)
	Other Asian	59	118 (87-159)
	European/Other*	2,423	146 (139-152)

Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

10.1.2 Leading Causes of Cancer Mortality

Table 31 indicates that lung cancer was the leading cause of cancer mortality among men aged 15 years or older, irrespective of the ethnic group to which they belonged. Rates of lung cancer mortality were similar among Chinese, Other Asian and European/Other males (approximately 30 per 100,000) with a slightly lower rate of 21 per 100,000 noted among Indian men across Auckland. Colorectal cancer and liver cancer also featured in the top five causes of cancer deaths among Chinese, Indian and Other Asian males.

Table 31: Leading causes of cancer mortality across the Auckland region by prioritised ethnicity among MALES aged 15 years or older (age standardised rate per 100,000 with 95% CI), 2006-2008

Rank	Chinese			Indian			Other Asian			European/Other*		
	Cancer	No.†	Rate	Cancer	No.†	Rate	Cancer	No.†	Rate	Cancer	No.†	Rate
1	Lung	29	31	Lung	9	21	Lung	9	30	Lung	411	30
2	Colorectal	12	13	Brain	5	6	Colorectal	5	20	Prostate	365	25
3	Liver	11	12	Bladder	2	6	Pancreas	5	18	Colorectal	247	18
4	Stomach	7	8	Liver	2	5	Liver	8	16	Melanoma	138	11
5	Pancreas	5	7	Colorectal	2	3	Stomach	4	15	Pancreas	113	8

Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
†Total number of deaths between 2006 and 2008

Table 32 indicates that the leading cause of cancer mortality among women varied depending on the ethnic group examined. Breast and pancreatic cancer featured in the top five causes of women from all four ethnic groups examined.

Table 32: Leading causes of cancer mortality across the Auckland region by prioritised ethnicity among FEMALES aged 15 years or older (age standardised rate per 100,000 with 95% CI), 2006-2008

Rank	Chinese			Indian			Other Asian			European/Other*		
	Cancer	No.†	Rate	Cancer	No.†	Rate	Cancer	No.†	Rate	Cancer	No.†	Rate
1	Lung	18	16	Leukaemia	4	7	Liver	7	18	Breast	384	27
2	Breast	10	8	Uterus	4	6	Lung	9	14	Lung	399	25
3	Liver	4	5	Ovary	3	6	Breast	9	13	Colorectal	292	16
4	Pancreas	5	4	Breast	4	5	Pancreas	5	11	Ovary	126	8
5	Ovary	3	3	Pancreas	2	4	Colorectal	6	10	Pancreas	128	7

Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
†Total number of deaths between 2006 and 2008

10.2 Cancer Registrations

10.2.1 Cancer Registrations Overall

Table 33 indicates that, among both men and women, overall cancer registration rates among Chinese, Indian and Other Asian people were lower than among European/Other people, and these were significant differences. Among both men and women from the three Asian ethnic groups, Indian people had the lowest rate of overall cancer registrations, although the differences in rates between Indian, Chinese and Other Asian people were not significant.

Table 33: Age-standardised overall cancer registration rate (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity and sex among people aged 15 years or older, 2006-2008

Sex	Ethnicity	Number	Rate per 100,000 (95%CI)	
Male	Chinese	270	273	(238-312)
	Indian	123	196	(158-244)
	Other Asian	119	301	(242-375)
	European/Other*	6,738	528	(515-541)
Female	Chinese	285	230	(204-260)
	Indian	169	224	(189-267)
	Other Asian	187	270	(227-321)
	European/Other*	6,031	431	(419-442)

Source: New Zealand Cancer Registry; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

10.2.2 Leading Causes of Cancer Registrations

Prostate cancer was the leading cause of cancer registrations among men, irrespective of the ethnic group examined, but European/Other men had more than twice the rate of prostate cancer registrations as compared to Chinese, Indian or Other Asian men.(Table 34) Colorectal and lung cancer also featured among the top five causes of cancer registration for men from all four ethnic groups examined.

Table 34: Leading causes of cancer registrations across the Auckland region by prioritised ethnicity among MALES aged 15 years or older (age standardised rate per 100,000 with 95% CI), 2006-2008

Rank	Chinese			Indian			Other Asian			European/Other*		
	Cancer	No.†	Rate	Cancer	No.†	Rate	Cancer	No.†	Rate	Cancer	No.†	Rate
1	Prostate	58	56	Prostate	30	54	Prostate	19	60	Prostate	1,986	153
2	Lung	45	50	Colorectal	15	24	Colorectal	21	53	Melanoma	1,000	81
3	Colorectal	39	40	Lung	11	23	Liver	14	40	Colorectal	969	74
4	Liver	24	23	Non-Hodgkins Lymphoma	9	13	Lung	15	39	Lung	543	41
5	Stomach	21	19	Leukaemia	6	10	Stomach	6	21	Non-Hodgkins Lymphoma	253	20

Source: New Zealand Cancer Registry; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
†Total number of deaths between 2006 and 2008

Table 35 indicates that breast cancer was the leading cause of cancer registrations between 2006 and 2008 among women from all four ethnic groups examined, but the registration rates were highest among European/Other women. Colorectal cancer also featured among the top five causes of cancer registration for all four ethnic groups.

Table 35: Leading causes of cancer registrations across the Auckland region by prioritised ethnicity among FEMALES aged 15 years or older (age standardised rate per 100,000 with 95% CI), 2006-2008

Rank	Chinese			Indian			Other Asian			European/Other*		
	Cancer	No.†	Rate	Cancer	No.†	Rate	Cancer	No.†	Rate	Cancer	No. †	Rate
1	Breast	101	76	Breast	169	66	Breast	65	79	Breast	1,775	138
2	Colorectal	37	32	Uterus	25	36	Colorectal	20	43	Melanoma	854	65
3	Lung	31	27	Colorectal	12	16	Lung	15	23	Colorectal	872	55
4	Non-Hodgkins Lymphoma	14	12	Liver	6	13	Thyroid	15	18	Lung	462	30
5	Thyroid	16	12	Thyroid	11	11	Liver	6	15	Non-Hodgkins Lymphoma	228	16

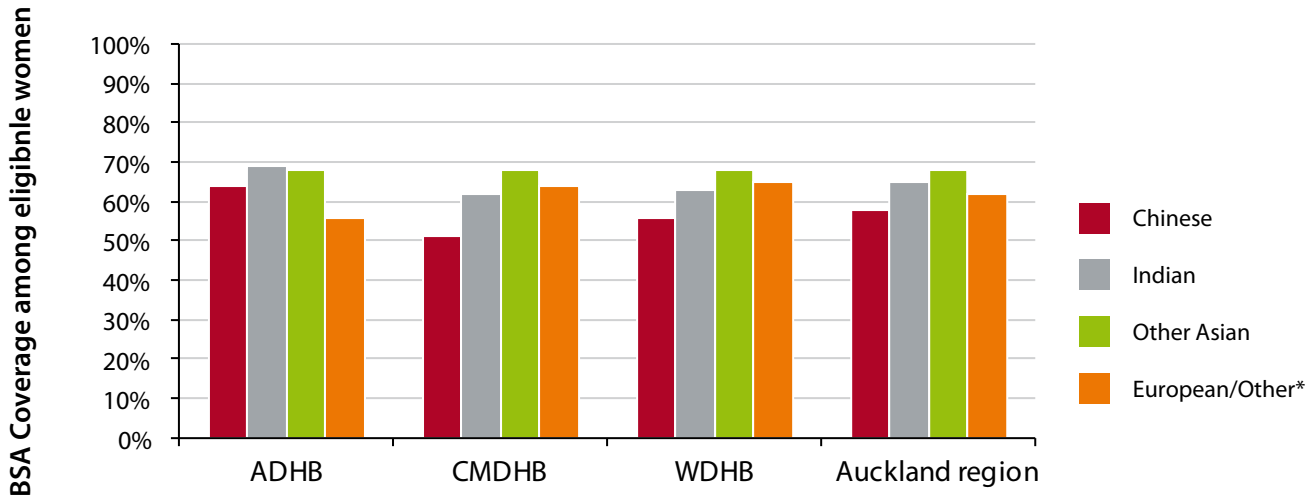
Source: New Zealand Cancer Registry; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
†Total number of deaths between 2006 and 2008

10.3 Breast Screening

Mammography is an effective intervention for early detection of breast cancer and mortality reduction from the condition. Breast Screen Aotearoa (BSA) was established in 1998. BSA does not routinely monitor coverage rates among Asian women as they are not considered to be a priority group for breast cancer screening. (B Irwin, personal communication, 2011).

Free biennial mammograms are available through the BSA programme to New Zealand women aged 45-69 years who have no symptoms of breast cancer, have not had a mammogram in the preceding 12 months, are not pregnant, and are eligible for public health services in New Zealand.

Figure 40: Breast Screening coverage by prioritised ethnicity for females aged 45-69 years, 2009-2010



Source: National Screening Unit; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

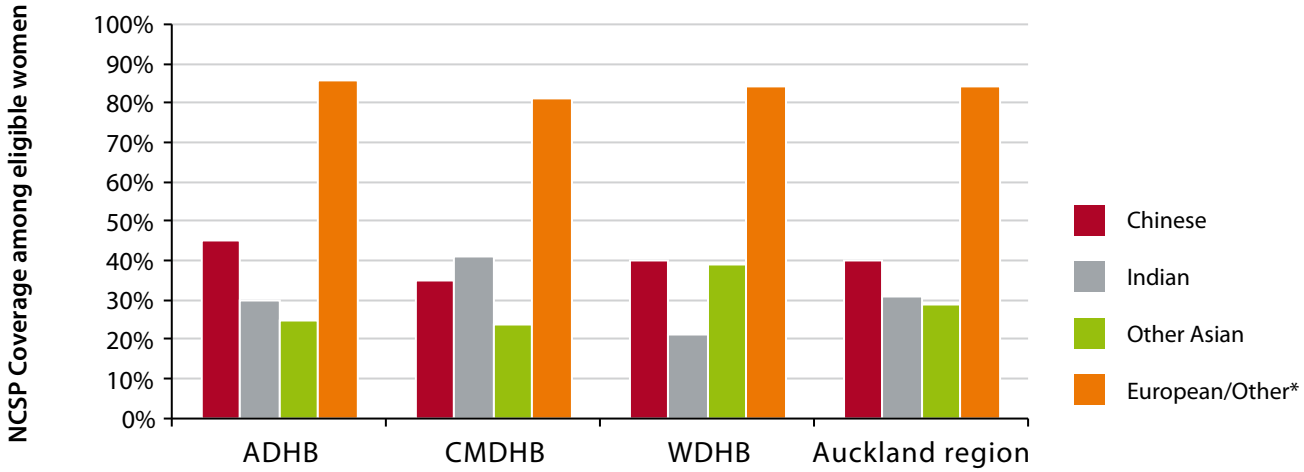
Breast screening coverage rates for Chinese women in CMDHB and WDHB were slightly lower compared to European/Other women. Among Indian and Other Asian women across the Auckland region, and Chinese women in ADHB, coverage rates were similar to or higher than corresponding rates for European/Other women.

10.4 Cervical Screening

The National Cervical Screening Programme (NCSP) was set up in 1990 to reduce the number of women who develop cervical cancer and the number who die from it in New Zealand.[54] The National Screening Unit reports cervical screening rates among Asian women overall, but does not routinely report data broken down by Asian ethnic sub-group.

Cervical screening coverage rates include all cytology, histology and human papillomavirus results posted on the NCSP register for women aged 20-69 years over a given three year period. The coverage rates presented are adjusted to exclude women who have had a hysterectomy and do not require cervical smears.[55]

Figure 41: Cervical Screening coverage by prioritised ethnicity for females aged 20-69 years, 2008-2010



Source: National Screening Unit; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Cervical screening coverage rates (Figure 41) for Chinese, Indian and Other Asian women were generally less than half those of European/Other women. Indian women in WDHB had the lowest cervical screening rates across the three DHBs among the ethnic groups examined.

10.5 Summary of Cancer

Mortality

Among both men and women, Other Asian people had the highest cancer mortality rates of the Asian groups examined. Chinese and Indian people had significantly lower cancer mortality rates between 2006 and 2008 than European/Others, and while Other Asian men and women also had lower rates than European/Other men and women, these differences were not significant.

Lung cancer was the leading cause of cancer mortality among men aged 15 years or older, irrespective of the ethnic group to which they belonged. Colorectal cancer and liver cancer also featured in the top five causes of cancer deaths among Chinese, Indian and Other Asian males.

The leading cause of cancer mortality among women was variable depending on the ethnic group examined. Breast and pancreatic cancer featured in the top five causes of women from all four ethnic groups examined.

Cancer registrations

Overall cancer registration rates among Chinese, Indian and Other Asian people were lower than among European/Other people, and these were significant differences.

Prostate cancer was the leading cause of cancer registrations among men, irrespective of the ethnic group examined, but European/Other men had more than twice the rate of prostate cancer registrations as compared to Chinese, Indian or Other Asian men.

Breast cancer was the leading cause of cancer registrations between 2006 and 2008 among women from all four ethnic groups examined, but the registration rates were highest among European/Other women.

Breast Screening

Breast screening coverage rates among the three groups of Asian women were similar to European/Other women: slightly lower rates were noted among Chinese women in CMDHB and WDHB and slightly higher rates among Indian and Other Asian women across the Auckland region, and Chinese women in ADHB.

Cervical Screening

Cervical screening coverage rates for Chinese, Indian and Other Asian women were generally less than half those of European/Other women, with the lowest rates noted among Indian women in WDHB.

11. Health of Older People

People aged 65 years or older comprise around 10% of the Auckland population. Significant growth is expected in this demographic group over the next decade, particularly among Asian communities in Auckland who have relatively young populations currently. The health of people aged 65 years or older was identified as a strategic focus in the Northern Region Health Plan. A number of initiatives for exploration during 2011/2012 were outlined, including a review of home-based service provision, review of the current capacity for respite care and day care services, and workforce modelling and development.

This section presents data from the most recent Older Persons' Ability Level Census held in 2008 regarding use of residential care facilities, and also selected indicators from the ADHB interRAI database relating to older people living at home.

11.1 Aged Residential Care

Since 1988, four Older Persons' Ability Level (OPAL) census surveys have been conducted to assess changes in the characteristics and dependency of older people in residential care across the Auckland region. The surveys included all people residing in Aged Residential Care facilities licensed for long-term care of older people in Auckland. Data was collected on a single designated day for each census. Data is not presented here for the 1988 or 1993 censuses.

In September 2008, there were 171 licensed aged care facilities across the Auckland region, representing a total of 8,763 licensed beds. Response rates were 65% in 1998 and 90% and 2008, so results were weighted to adjust for the variation in response rate.

Ethnicity was prioritised according to the standard protocol employed by the Ministry of Health. Data were not available separately for Chinese, Indian and Other Asian people.

Seventy Asian people across Auckland were found to be in aged residential care or private hospital care in 1998, and this number had increased to 124 by 2008. The proportion of Asian people in Auckland aged 65 years or older who were residents in rest homes (Table 36) or in private hospitals (Table 37) was lower than other ethnic groups in both 1998 and 2008.

Table 36: Proportion of population aged 65 years or older who were rest home residents (male and female combined) in the Auckland region by prioritised ethnicity, 1998 and 2008

Ethnicity	1998		2008	
	Number	% of 65+ population	Number	% of 65+ population
Asian	32	0.8%	53	0.4%
Maori	89	1.8%	87	1.6%
Pacific	97	2.0%	197	2.2%
European/Other*	5,188	5.0%	7,200	6.3%

Source: OPAL 10/9/8 Older Persons' Ability Level Census; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Table 37: Proportion of population aged 65 years or older who were private hospital residents (male and female combined) in the Auckland region by prioritised ethnicity, 1998 and 2008

Ethnicity	1998		2008	
	Number	% of 65+ population	Number	% of 65+ population
Asian	38	0.4%	71	0.5%
Maori	60	1.9%	80	1.5%
Pacific	103	2.1%	199	2.2%
European/Other*	2,171	2.1%	2,854	2.5%

Source: OPAL 10/9/8 Older Persons' Ability Level Census; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

11.2 Older People Residing at Home

Data regarding older people residing at home in Auckland are currently available as a result of interRAI assessments. The interRAI assessment is a tool for needs assessment of older people that is utilised internationally. In New Zealand, several reports into assessment of older people between 2000 and 2004 described an unacceptable gap between current and best practice. During 2005 and 2006, the Ministry of Health successfully trialled the interRAI tool in five DHBs. The 2008 Budget subsequently allocated funding for the introduction and use of the interRAI Home Care Assessment tool by Needs Assessment Services in all DHBs by 2012. (M Stewart, CMDHB, personal communication, 2012).

InterRAI assessments have been conducted within CMDHB and WDHB since mid-2011, but meaningful data from these DHBs are not yet available. However, ADHB commenced interRAI assessments in 2008, and 1,277 people were assessed during the 2011 calendar year. Selected indicators from the ADHB interRAI database for 2011 are presented in Table 38. Ethnic groups are categorised according to total response ethnicity and data were not available separately for Chinese, Indian and Other Asian sub-groups.

A similar proportion of Asian older people (68%) received home care services as compared to European and Other older people (67% for both groups). Fewer Asian older people (46%) lived at home either alone or with a spouse only, as compared to 79% of European older people, but 34% of Asian older people lived with children compared to 13% of their European counterparts.. Ninety six percent of Asian older people assessed were to remain at home, and this proportion was similar across all the ethnic groups examined.

Table 38: Selected indicators for ADHB males and females combined aged 65 years or older who lived in a private home and received an interRAI assessment by total response ethnicity, 2011

Indicator	Ethnicity	Number	% of total number assessed from that ethnic group
Males and females combined who lived at home and received home care services	Asian	71	68%
	Maori	21	51%
	Pacific	85	51%
	European	630	67%
	Other	24	67%
Males and females combined who lived at home either alone or with a spouse	Asian	48	46%
	Maori	20	49%
	Pacific	53	32%
	European	745	79%
	Other	17	47%
Males and females combined who lived with children	Asian	36	34%
	Maori	15	37%
	Pacific	72	43%
	European/Other*	123	13%
	Other	12	33%
Males and females combined who were to remain at home	Asian	101	96%
	Maori	40	98%
	Pacific	162	96%
	European/Other*	897	95%
	Other	35	97%

Source: ADHB interRAI database; total response ethnicity.

11.3 Summary of Health of Older People

Data were not available separately for Chinese, Indian and Other Asian older people in Auckland.

Aged Residential Care

Less than 1% of Asian people in Auckland aged 65 years or older are residents in rest homes or in private hospitals, and this proportion was lower than other compared ethnic groups in both 1998 and 2008.

Older People Residing at Home

Data regarding older people residing at home is currently available through the interRAI home care needs assessments. At present, ADHB is the only DHB across Auckland that has meaningful interRAI data available.

A similar proportion of Asian older people received home care services (68%) as compared to European and Other older people, and almost everyone assessed across all ethnic groups were to remain at home. Fewer Asian older people lived at home either alone or with a spouse only (46%), but more lived with children (34%) as compared to European older people (79% lived at home alone or with a spouse only and 13% lived with children).

12. Family violence and Elder abuse/neglect

This section presents data relating to child abuse, family violence, elder abuse/neglect and access to family violence support services.

As will be discussed in Chapter 21, where the key themes from the health service provider interviews are presented, family violence is heavily stigmatised and therefore likely to be under-reported among Auckland Asian communities.

12.1 Child abuse

12.1.1 Substantiated Abuse Findings

Child, Youth and Family (CYF) is a service of the Ministry of Social Development. CYF works to protect the welfare and interests of New Zealand children, youth and families, and is guided by the Children, Young Persons, and Their Families Act 1989. In the year ending 30 June 2010, around 43,000 care and protection notifications were received in the Auckland area by CYF as compared to 27,000 notifications received in the year ending 30 June 2008. This reflects heightened community awareness of child abuse and neglect and increased willingness to contact CYF regarding child welfare concerns across Auckland. (B Mackenzie, personal communication, 2011).

Table 39 presents the number and rate of different types of substantiated abuse recorded among Asian children and youth as compared to European/Other children and youth.

Table 39: Rate of substantiated abuse findings† (per 100,000) recorded across the Auckland region by prioritised ethnicity of the child or young person (males and females combined), financial years 2007/2008 – 2009/2010

Type of Substantiated Abuse	Ethnicity	Financial Year (1 July to 30 June)					
		2007/2008		2008/2009		2009/2010	
		Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Emotional Abuse	Asian	165	303	176	313	177	304
	European/Other*	874	667	978	759	1009	789
Neglect	Asian	21	39	26	46	49	84
	European/Other*	266	203	354	275	308	240
Physical abuse	Asian	48	88	63	112	45	77
	European/Other*	159	121	209	162	196	153
Sexual abuse	Asian	16	29	24	43	24	41
	European/Other*	115	88	148	115	141	110

Source: Child, Youth and Family; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
† Multiple types of substantiated abuse may have been suffered by one child

All types of substantiated abuse were found at lower rates among Asian families as compared to European/Other families. Across the three years examined, rates of emotional abuse remained static among Asian children and young people but rates of neglect and sexual abuse increased and physical abuse rates fluctuated.

12.1.2 Care and Protection Orders Granted

The Ministry of Justice records care and protection orders granted for children and young people, including the ethnicity of the children or youth in question. In 2010, six care and protection orders were granted for Asian children, representing a rate of 10 children granted orders per 100,000. By comparison, 240 European/Other children and young people were granted orders over this same period (187 children granted orders per 100,000). Given the rates of substantiated abuse findings presented in Table 39, it appears that judicial preventive measures for child abuse and neglect are being under-utilised for Asian children and young people.

12.2 Family violence

12.2.1 Physical and Sexual Assaults

Table 40 presents New Zealand Police data regarding physical and sexual assaults occurring across the Auckland region in 2010 that were flagged by Police as being related to family violence. One individual could have more than one assault recorded during this year, and therefore the rates presented in Table 40 represent the number of assaults per 100,000, not the number of individuals assaulted during 2010. Police boundaries for the Auckland region also differ to the boundaries of the three DHBs in Auckland. The rates presented are not age-standardised.

Indian people had a higher rate of physical assaults associated with family violence recorded by Police but a similar rate of documented family-violence-related sexual assaults as compared to European/Other people. Chinese people and Other Asian people (considered together) had the lowest rates of family-violence related assaults.

Table 40: Family-violence-related assaults across the Auckland region involving victims (males and females combined) aged 15 years or older by ethnicity†, 2010

Type of Assault	Ethnicity	Number of assaults	Rate of assaults per 100,000
Physical Assaults	Chinese and Other Asian	223	128
	Indian	389	490
	European/Other*	2,344	350
Sexual Assaults	Chinese and Other Asian	4	2
	Indian	11	14
	European/Other*	23	13

Source: New Zealand Police
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
†Ethnicity either self-identified or assigned by attending officer.

12.2.2 Convictions for 'Male assaults female'

It is not possible to isolate convictions for assaults relating specifically to family violence. However, the Ministry of Social Development uses 'male assaults female' offences as a proxy indicator of family-violence-related assaults.[56]

Table 41: Convictions for 'Male assaults female' across the Auckland region by prioritised ethnicity, 2010

Ethnicity	Number of convictions	Rate of convictions per 100,000
Chinese and Other Asian	31	38
Indian	78	190
European/Other*	294	90

Source: Ministry of Justice; standard prioritised ethnicity
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
Please note: an individual offender may have had more than one conviction in 2010.

Table 41 indicates that the non-age-standardised rate of 'male assaults female' convictions among Indian people was more than twice the corresponding rate among European/Other people. Chinese and Other Asian people (considered together) had a much lower rate than the other two ethnic groups considered.

12.3 Elder Abuse

12.3.1 Assaults

Across Auckland, five family-violence related physical assaults involving Asian victims aged 65 years or older were recorded by New Zealand Police in 2010. (Indian: one assault; Chinese and Other Asian: four assaults). This represents a rate of 30 such assaults per 100,000 Asian people aged 65 years or older in the Auckland region. By comparison, 61 family-violence-related physical assaults were recorded during the same period for European/Other people of the same age, corresponding to a rate of 51 such assaults per 100,000 European/Other peoples aged 65 years or older. The rates mentioned are not age-standardised. Given the low absolute number of family violence-related physical assaults recorded among Asian and European/Other older people, even a small change in the number of assaults recorded could dramatically alter these rates.

12.4 Sexual assaults

Across the Auckland region in 2010, no family-violence-related sexual assaults involving people aged 65 years or older were recorded by New Zealand Police.

12.5 Access to Family Violence Support Services

12.5.1 Victim Support

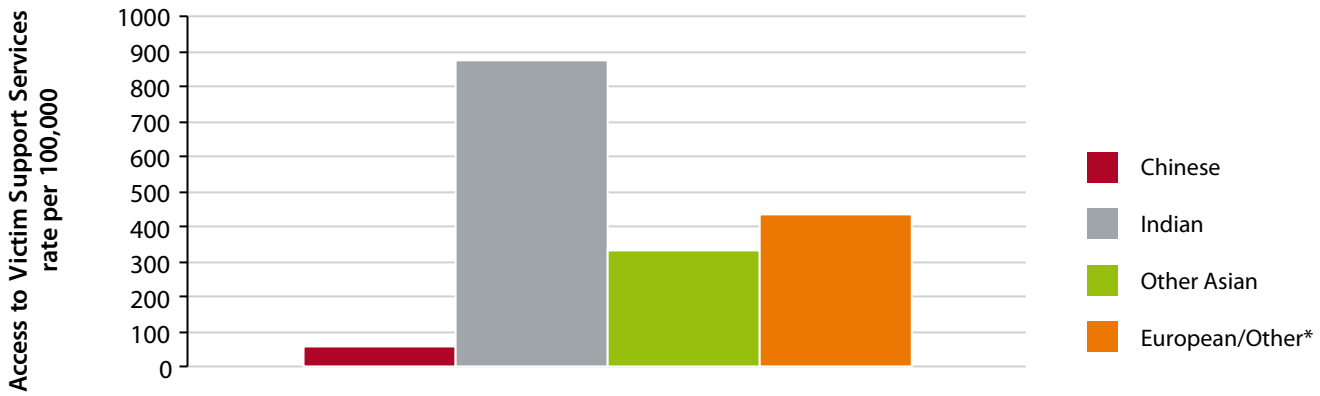
Victim Support is a community organisation that supports people affected by crime and other trauma. Table 42 and Figure 42 present data regarding access to Victim Support services for family violence incidents by ethnicity in 2010 across the Auckland region. Please note that the numbers and rates presented relate to the number of times that Victim Support services were utilised during 2010 by each ethnic group, not the number of individuals accessing services during this period. Rates are not age-standardised, and encompass people of all ages as support services are provided to anyone affected by family violence irrespective of age.

Table 42: Use of Victim Support services (males and females combined) for family violence incidents across the Auckland region by prioritised ethnicity†, 2010

Ethnicity	Number	Rate per 100,000
Chinese	78	61
Indian	879	876
Other Asian	277	330
European/Other*	3,495	438

Source: Victim Support. Please note that numbers and rates relate to the number of times that services were accessed during 2010, not the number of individuals utilising services during 2010.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
† Prioritised ethnicity (either self-reported or assigned by support worker) as recorded in Victim Support records

Figure 42: Use of Victim Support services (rate per 100,000, males and females combined) for family violence incidents across the Auckland region by prioritised ethnicity†, 2010



Source: Victim Support. Please note that rates relate to the number of times that services were accessed during 2010, not the number of individuals utilising services during 2010.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
† Prioritised ethnicity (either self-reported or assigned by support worker) as recorded in Victim Support records

Indian people had the highest rates of access to Victim Support services across Auckland for family violence-related incidents among the ethnic groups examined. The reasons for this increased rate among Auckland Indians are unclear, but may include a higher rate of family violence incidents and/or possibly a greater propensity to seek support compared to other ethnic groups given recent health promotion work among the Auckland Indian community around family violence. Other Asian people had lower rates of access to Victim Support services for family violence as compared to European/Other people, and Chinese people had the lowest rates of all the ethnic groups examined. However, family violence is heavily stigmatised in all Asian communities in Auckland so there is likely to be significant under-utilisation of services among all three Asian sub-groups for family violence.

12.5.2 Women's Refuge

Women's Refuge is a not-for profit organisation that provides support to women and children affected by family violence across the country. Statistics regarding access to Women's Refuge services in the Auckland region were not available. However, Table 43 presents data pertaining to the use of Women's Refuge services across New Zealand over the past three financial years. Asian women and children in New Zealand comprise the lowest proportion of those accessing refuge services of all the ethnic groups examined, with access rates remaining relatively static for the past three financial years.

Table 43: Percentage of women and children using Women's Refuge services across New Zealand by ethnicity†, financial years 2008/2009 - 2010/2011

Ethnicity	Financial Year (1 July to 30 June)					
	2008/2009		2009/2010		2010/2011	
	% of all women using services	% of all children using services	% of all women using services	% of all children using services	% of all women using services	% of all children using services
Asian	2%	2%	3%	2%	2%	2%
Maori	45%	54%	45%	54%	50%	57%
Pacific	4%	8%	6%	10%	6%	8%
European/Other*	49%	36%	46%	34%	42%	33%

Source: Women's Refuge Annual Reports 2008/2009, 2009/2010, 2010/2011
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples
† Ethnicity as recorded in Women's Refuge records

12.6 Summary of Family Violence and Elder Abuse/neglect

Child Abuse

All types of substantiated abuse are recorded at lower rates among Asian families as compared to European/Other families.

In 2010, the rate of care and protection orders granted for Asian children was 10 children granted orders per 100,000 compared to a rate of 187 European/Other children granted orders per 100,000. Given the rates of substantiated abuse findings presented, it appears that judicial preventive measures for child abuse and neglect are being under-utilised for Asian children and young people.

Family Violence

According to New Zealand Police data, Indian people had a higher rate of physical assaults associated with family violence recorded by Police but a similar rate of documented family-violence-related sexual assaults as compared to European/Other people. Chinese people had the lowest rates of family-violence related assaults.

The rate of 'male assaults female' convictions among Indian people was more than twice the corresponding rate among European/Other people. Chinese and Other Asian people (considered together) had a much lower rate than the other two ethnic groups considered.

Elder Abuse

Across Auckland, a rate of 30 family-violence related physical assaults per 100,000 Asian people aged 65 years or older were recorded by New Zealand Police in 2010 as compared to a rate of 51 such assaults per 100,000 European/Other peoples aged 65 years or older. However, the absolute number of assaults recorded among Asian and European/Other older people was relatively small, such that even a small change in the number of assaults recorded could dramatically alter these rates.

Across the Auckland region in 2010, no family-violence-related sexual assaults involving people aged 65 years or older were recorded by New Zealand Police.

Access to Family Violence Support Services

Among the ethnic groups examined, Indian people had the highest rates of Victim Support service utilisation in 2010 for family violence-related incidents across Auckland. Other Asian people had lower rates of access to Victim Support services for family violence as compared to European/Other people, and Chinese people had the lowest rates of all the ethnic groups examined. However, family violence is heavily stigmatised in all Asian communities in Auckland so there is likely to be significant under-utilisation of services among all three Asian sub-groups for family violence.

Asian women and children in New Zealand comprise the lowest proportion of those accessing Women's Refuge services of all the ethnic groups examined, with access rates remaining relatively static for the past three financial years.

13. Mental Health

This section presents the following mental health data for Asian populations in Auckland:

- Non-accidental self-harm and suicide
- Clinically significant mental health conditions
- Access to secondary mental health and addiction services.

Most of the data presented in this section have been drawn from the Programme for the Integration of Mental Health Database (PRIMHD). In July 2008, this national database replaced the MHINC, which collected national service access data, and MH-SMART which collected outcomes data. The data stored in PRIMHD is intended to be sourced from both DHBs and non-government organisations (NGOs). At present, all DHB mental health services submit data to PRIMHD but data collection from NGOs and regarding the source and timing of referrals to DHB services is still being established. Given the incomplete nature of NGO and DHB-referral data currently, only data regarding clinical interactions with DHB mental health services have been presented in this section. However, this DHB data will under-represent the true burden of mental health issues in the community as only those people accessing secondary or tertiary mental health services will be captured. Interviews with health service providers (Section 21) indicate that there is considerable stigmatisation associated with mental health issues among Asian communities, particularly among new or recent migrants, and consequently there is likely to be significant under-reporting and under-utilisation of services for these conditions.

13.1 Non-accidental Self Harm and Suicide

13.1.1 Non-accidental Self Harm

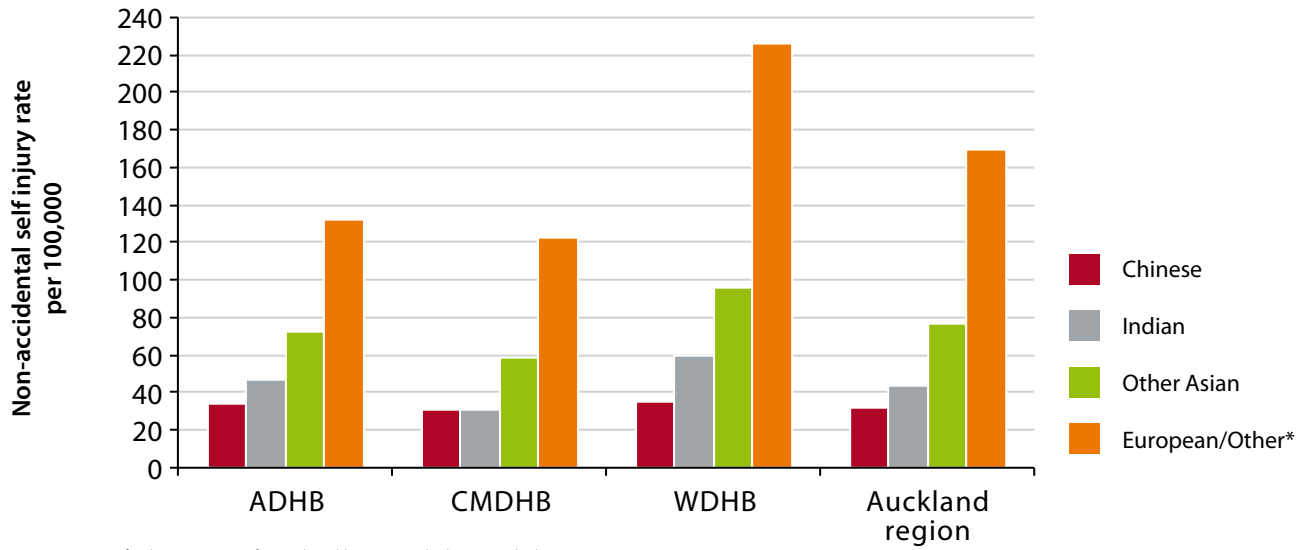
Table 44 and Figure 43 present the rate of non-accidental self-injury reported among adult men and women combined who accessed DHB mental health services between 1 July 2008 and 30 June 2011. Chinese, Indian and Other Asian people all had significantly lower rates of self-harm as compared to European/Other people. There were no significant differences between the three Asian groups, with the exception of the significantly lower self-harm rates of Chinese as compared to Other Asian people in WDHB and across the Auckland region.

Table 44: Age-standardised rate of non-accidental self-injury (per 100,000 with 95% CI) by prioritised ethnicity among males and females combined aged 15 years or older who accessed DHB mental health services, 1 July 2008 – 30 June 2011

Ethnicity	DHB			
	ADHB	CMDHB	WDHB	Auckland region
Chinese	34 (24-49)	31 (20-46)	35 (24-53)	32 (26-40)
Indian	47 (31-75)	31 (20-50)	59 (39-101)	43 (34-56)
Other Asian	72 (48-117)	58 (35-96)	96 (73-128)	77 (63-95)
European/Other*	132 (122-142)	123 (112-135)	226 (215-237)	169 (163-175)

Source: Programme for the Integration of Mental Health Data; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 43: Age-standardised rate of non-accidental self-injury (per 100,000) by prioritised ethnicity among males and females combined aged 15 years or older who accessed DHB mental health services, 1 July 2008 – 30 June 2011



Source: Programme for the Integration of Mental Health Data; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

13.1.2 Suicide

No suicides among Asian children in Auckland aged 0 to 14 years were recorded between 2006 and 2008.

Table 45 presents data for the number and age-standardised rates of suicide among adults across Auckland between 2006 and 2008. As the number of suicides was relatively small, data have not been disaggregated by sex or by DHB. Compared to European/Others, the rate of suicide was significantly lower among Chinese and Indians, and also lower among Other Asians although this difference was not significant.

Table 45: Age-standardised suicide rate (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity among males and females combined aged 15 years or older, 2006-2008

Ethnicity	Number	Rate per 100,000 (95%CI)
Chinese	8	3 (1-7)
Indian	7	4 (1-11)
Other Asian	13	12 (6-25)
European/Other*	279	14 (13-16)

Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

13.2 Clinically Significant Mental Health Conditions

Table 46 and Figure 44 present the rate of clinically significant mental health conditions among adults who accessed DHB mental health services between 1 July 2008 and 30 June 2011. A person is considered to have a clinically significant mental health condition if they are assigned a Health of the Nation Outcomes Scale (HoNOS) rating of 2-4 inclusive. HoNOS is a key measure of severity and impact of mental health conditions that is used internationally.

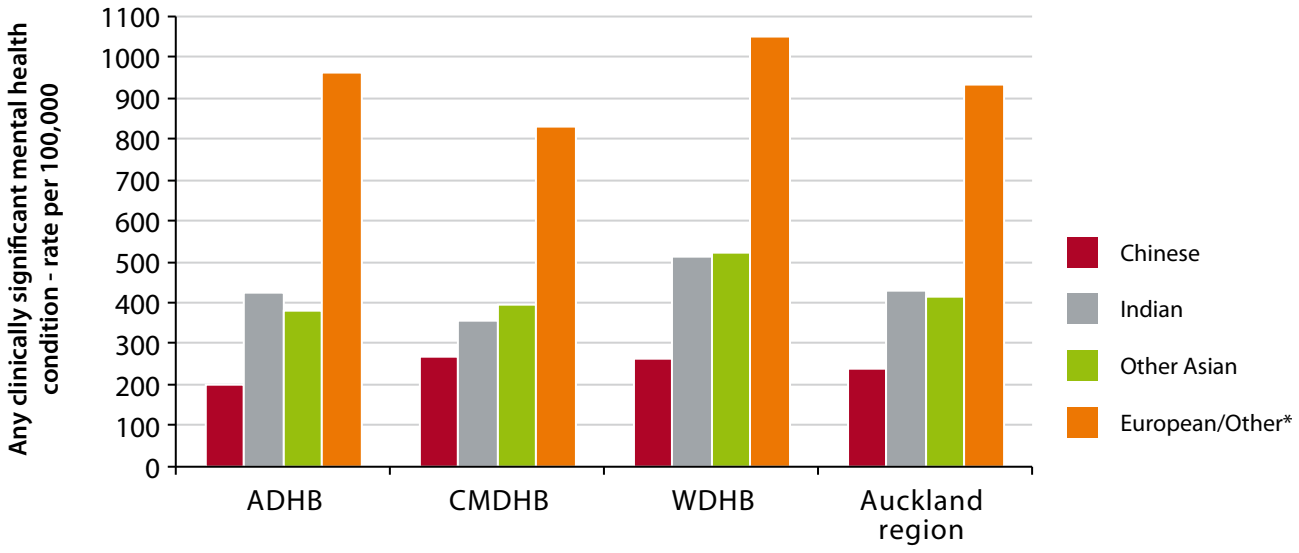
Chinese, Indian and Other Asian people all had significantly lower rates of clinically significant mental health conditions as compared to European/Other people. Chinese people had significantly lower rates than all other ethnic groups examined.

Table 46: Age-standardised rate of any clinically significant mental health condition (per 100,000 with 95% CI) by prioritised ethnicity among males and females combined aged 15 years or older who accessed DHB mental health services, 1 July 2008 – 30 June 2011

Ethnicity	DHB of Domicile			
	ADHB	CMDHB	WDHB	Auckland region
Chinese	198 (169-234)	267 (237-302)	262 (228-300)	241 (223-261)
Indian	423 (353-512)	357 (310-414)	512 (462-570)	431 (400-466)
Other Asian	381 (330-440)	393 (334-468)	520 (452-602)	416 (383-453)
European/Other*	962 (940-985)	830 (807-853)	1053 (1022-1085)	931 (917-945)

Source: Programme for the Integration of Mental Health Data; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 44: Age-standardised rate of any clinically significant mental health condition (per 100,000) by prioritised ethnicity among males and females combined aged 15 years or older who accessed DHB mental health services, 1 July 2008 – 30 June 2011



Source: Programme for the Integration of Mental Health Data; standard prioritised ethnicity
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

13.3 Access to Secondary Mental Health and Addiction Services

13.3.1 Access to any DHB Mental Health Service

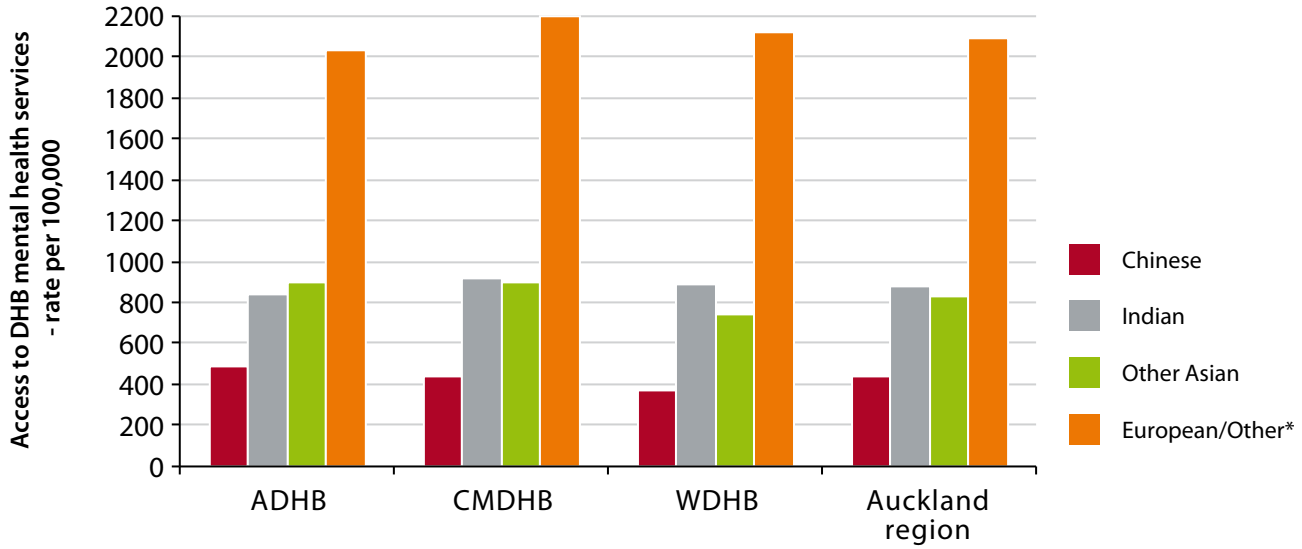
Table 47 and Figure 45 present data regarding the rate of access to any DHB mental health service among Auckland adults between 1 July 2008 and 30 June 2011. All three Asian ethnic groups had significantly lower rates of service access as compared to European/Other people. Chinese people had significantly lower rates of service access as compared to all other ethnic groups examined.

Table 47: Age-standardised rate for access to any DHB mental health service (per 100,000 with 95% CI) by prioritised ethnicity among males and females combined aged 15 years or older, 1 July 2008 – 30 June 2011

Ethnicity	DHB of domicile			
	ADHB	CMDHB	WDHB	Auckland region
Chinese	491 (451-535)	440 (395-488)	365 (325-410)	435 (2074-2118)
Indian	842 (775-917)	922 (856-995)	890 (788-1009)	880 (837-926)
Other Asian	896 (810-996)	896 (808-998)	746 (677-823)	827 (782-876)
European/Other*	2035 (1998-2073)	2198 (2152-2245)	2125 (2091-2159)	2096 (2074-2118)

Source: Programme for the Integration of Mental Health Data; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 45: Age-standardised rate for access to any DHB mental health service (per 100,000) by prioritised ethnicity among males and females combined aged 15 years or older, 1 July 2008 – 30 June 2011



Source: Programme for the Integration of Mental Health Data; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

13.3.2 Inpatient Mental Health Admissions

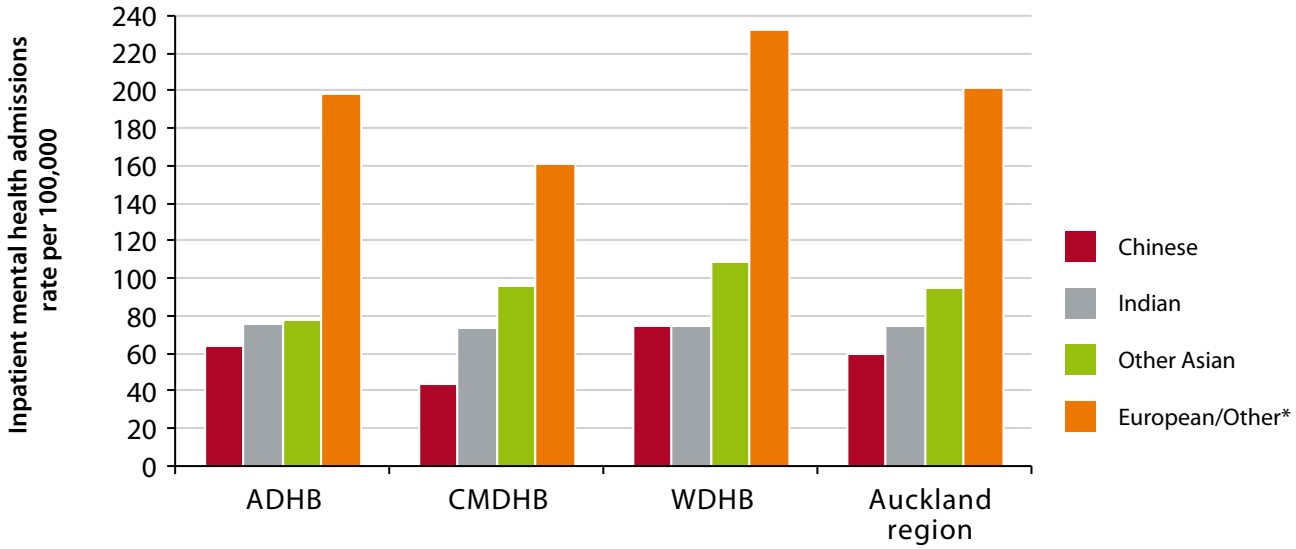
Table 48 and Figure 46 present data regarding adult inpatient mental health admissions between 1 July 2008 and 30 June 2011 in Auckland. Chinese, Indian and Other Asian people all had significantly lower inpatient admission rates as compared to European/Other people. Except for significantly lower rates among Chinese people as compared to Other Asian people in CMDHB and across the Auckland region, there were no significant differences in admission rates between the three Asian groups.

Table 48: Age-standardised rate for inpatient mental health admissions (per 100,000 with 95% CI) by prioritised ethnicity among males and females combined aged 15 years or older, 1 July 2008 – 30 June 2011

Ethnicity	DHB of domicile			
	ADHB	CMDHB	WDHB	Auckland region
Chinese	64 (51-83)	43 (30-61)	75 (57-98)	60 (52-70)
Indian	76 (56-107)	73 (55-98)	74 (50-120)	75 (63-90)
Other Asian	78 (56-120)	96 (67-140)	109 (84-143)	95 (80-114)
European/Other*	198 (187-210)	161 (149-173)	232 (222-244)	201 (195-208)

Source: Programme for the Integration of Mental Health Data; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 46: Age-standardised rate for inpatient mental health admissions (per 100,000) by prioritised ethnicity among males and females combined aged 15 years or older, 1 July 2008 – 30 June 2011



Source: Programme for the Integration of Mental Health Data; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

13.3.3 Access to DHB Addiction Services

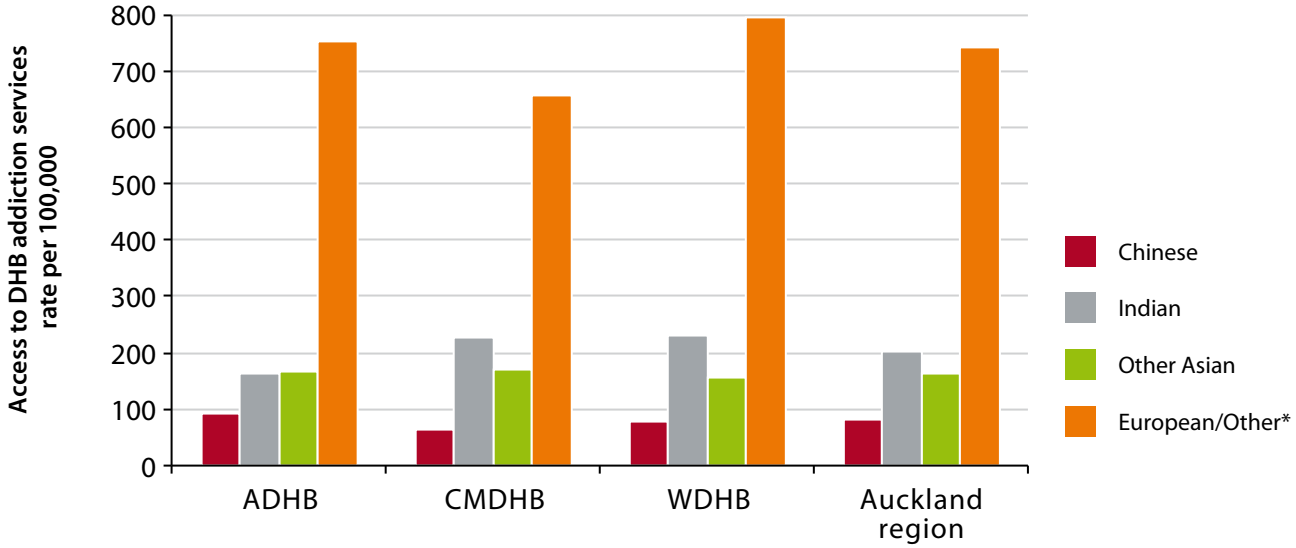
Table 49 and Figure 47 present the rate of access to DHB addiction services among Auckland adults between 1 July 2008 and 30 June 2011. Please note that access to addiction services provided by NGOs is not included in these figures, as these data were unavailable. All three Asian groups had significantly lower rates of DHB addiction service access compared to European/Other people, and Chinese people had significantly lower rates than the other two Asian sub-groups.

Table 49: Age-standardised rate for access to DHB addiction services (per 100,000 with 95% CI) by prioritised ethnicity among males and females combined aged 15 years or older, 1 July 2008 – 30 June 2011

Ethnicity	DHB of domicile			
	ADHB	CMDHB	WDHB	Auckland region
Chinese	93 (77-113)	63 (47-83)	79 (61-102)	81 (71-92)
Indian	164 (138-198)	226 (196-262)	232 (188-295)	201 (183-222)
Other Asian	168 (138-214)	171 (136-221)	157 (129-193)	162 (145-184)
European/Other*	755 (733-779)	659 (633-685)	795 (774-817)	742 (729-755)

Source: Programme for the Integration of Mental Health Data; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 47: Age-standardised rate for access to DHB addiction services (per 100,000) by prioritised ethnicity among males and females combined aged 15 years or older, 1 July 2008 – 30 June 2011



Source: Programme for the Integration of Mental Health Data; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

13.4 Summary of Mental Health

Non-accidental Self-Harm and Suicide

Among adults who accessed DHB mental health services between 1 July 2008 and 30 June 2011, Chinese, Indian and Other Asian people all had significantly lower rates of non-accidental self-harm as compared to European/Other people. There were no significant differences between the three Asian groups, with the exception of the significantly lower self-harm rates of Chinese as compared to Other Asian people in WDHB and across the Auckland region.

No suicides among Asian children aged 0 to 14 years were recorded between 2006 and 2008.

Compared to European/Others, the rate of suicide was significantly lower among Chinese and Indians, and also lower among Other Asians although this difference was not significant.

Clinically Significant Mental Health Conditions

Chinese, Indian and Other Asian people all had lower rates of clinically significant mental health conditions as compared to European/Other people, and these were significant differences. Chinese people had significantly lower rates than all other ethnic groups examined.

Access to Secondary Mental Health and Addiction Services

All three Asian ethnic groups had significantly lower rates of service access as compared to European/Other people. Chinese people had significantly lower rates of access to any DHB mental health service between 1 July 2008 and 30 June 2011 as compared to all other ethnic groups examined.

Chinese, Indian and Other Asian people all had significantly lower adult inpatient admission rates between 1 July 2008 and 30 June 2011 as compared to European/Other people. Except for significantly lower rates among Chinese people as compared to Other Asian people in CMDHB and across the Auckland region, there were no significant differences in admission rates between the three Asian groups.

All three Asian groups had significantly lower rates of DHB addiction service access compared to European/Other people, and Chinese people had significantly lower rates than the other two Asian sub-groups.

14. Child and Youth Health

This section presents the following child and youth health data:

- Mortality
- Child (0-14 years) potentially avoidable hospitalisations
- Low birth weight
- Immunisation coverage
- Oral health
- Summary of Youth '07 findings for Asian students.

14.1 Mortality

Mortality data for Auckland infants and children could not be meaningfully disaggregated for each DHB due to the small numbers of deaths for each ethnic group examined, so infant and child mortality data have been presented for the Auckland region as a whole.

14.1.1 Infant Mortality

The infant mortality rate (IMR) is used internationally as an indicator of child health status, and represents the number of children who die in the first year of life, per thousand live births, from all causes.

Table 50 indicates that there were no significant differences between the IMR of the three Asian groups examined and European/Other infants.

Table 50: Age-standardised mortality rate for all causes (per 1,000 with 95% CI) across the Auckland region by prioritised ethnicity among infants (males and females combined), 2006-2008

Ethnicity	Number	Rate per 1,000 (95%CI)
Chinese	7	2.0 (0.8-4.2)
Indian	14	3.5 (1.9-5.9)
Other Asian	10	3.4 (1.7-6.3)
European/Other*	73	2.8 (2.2-3.5)

Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

14.1.2 Child Mortality (0-14 years)

Table 51 presents the mortality rate for all causes among children aged 0 to 14 years. Please note that these rates include deaths occurring in the first year of life, and are presented as rates per 100,000 children. For all ethnic groups examined, at least 50% of the deaths occurring among children aged less than 15 years occur in the first year of life. There were no significant differences in the rate of child deaths from all causes among the ethnic groups examined.

Table 51: Age-standardised mortality rate for all causes (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity among children aged 0-14 years (males and females combined), 2006-2008

Ethnicity	Number	Rate per 100,000(95%CI)
Chinese	14	28 (15-47)
Indian	18	31 (18-49)
Other Asian	12	27 (14-48)
European/Other*	122	31 (26-37)

Source: National Mortality Collection; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

14.2 Child (0-14 years) Potentially Avoidable Hospitalisations

Table 52 indicates that, across the Auckland region, Chinese boys aged 0 -14 years have a significantly lower rate of potentially avoidable hospitalisations (PAH) as compared to European/Other children, but there were no significant differences between the PAH rates of Indian, Other Asian and European/Other boys.

Among girls aged 0 to 14 years, Chinese girls had a significantly lower PAH rate as compared to both European/Other and Indian girls, and a lower rate as compared to Other Asian girls although this difference was not significant. There were no significant differences in the PAH rate of Indian, Other Asian and European/Other girls across Auckland.

Table 52: Age-standardised potentially avoidable hospitalisation rate (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity and sex among children, 2008-2010

Sex	Ethnicity	Number	Rate per 100,000 (95%CI)
Male	Chinese	744	2,607 (2,374-2,889)
	Indian	1,190	3,637 (3,365-3,909)
	Other Asian	947	3,625 (3,347-3,904)
	European/Other*	7,537	3,861 (3,747-3,973)
Female	Chinese	613	2,301 (2,056-2,549)
	Indian	995	3,250 (2,963-3,536)
	Other Asian	692	2,745 (2,487-3,004)
	European/Other*	5,852	3,185 (3,080-3,289)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Table 53 indicates that the top three causes of PAH among children from each of the ethnic groups examined were ENT infections, dental conditions or asthma. The PAH rate for both dental conditions and asthma among Other Asian and Indian children were significantly higher than among their European/Other counterparts.

Table 53: Leading causes of potentially avoidable hospitalisation across the Auckland region by prioritised ethnicity among males and females combined aged 0-14 years (age standardised rate per 100,000), 2008-2010

Rank	Chinese			Indian			Other Asian			European/Other*		
	Cause of PAH	No.†	Rate	Cause of PAH	No.†	Rate	Cause of PAH	No.†	Rate	Cause of PAH	No.†	Rate
1	Dental conditions	236	434	Asthma	371	587	Dental conditions	407	773	ENT infections	2,979	788
2	Asthma	221	405	Dental conditions	311	503	Asthma	245	474	Dental conditions	1,659	428
3	ENT infections	135	244	ENT infections	242	388	ENT infections	165	320	Asthma	1,390	366
4	Pneumonia	129	233	Gastroenteritis	217	336	Other respiratory infections	137	278	Acute bronchiolitis	1,096	298
5	Other respiratory infections	129	231	Pneumonia	199	310	Pneumonia	139	272	Pneumonia	1,043	277

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

14.3 Low Birth Weight

Low birth weight is defined as a birth weight below 2500 grams. Low birth weight is either the result of preterm birth (ie before 37 weeks gestation) or restricted intrauterine growth. Low birth weight babies are approximately 20 times more likely to die than babies with a birth weight of more than 2500 grams. Low birth weight has also been associated with inhibited growth and cognitive development, as well as chronic diseases such as coronary heart disease and Type 2 Diabetes later in life.[57]

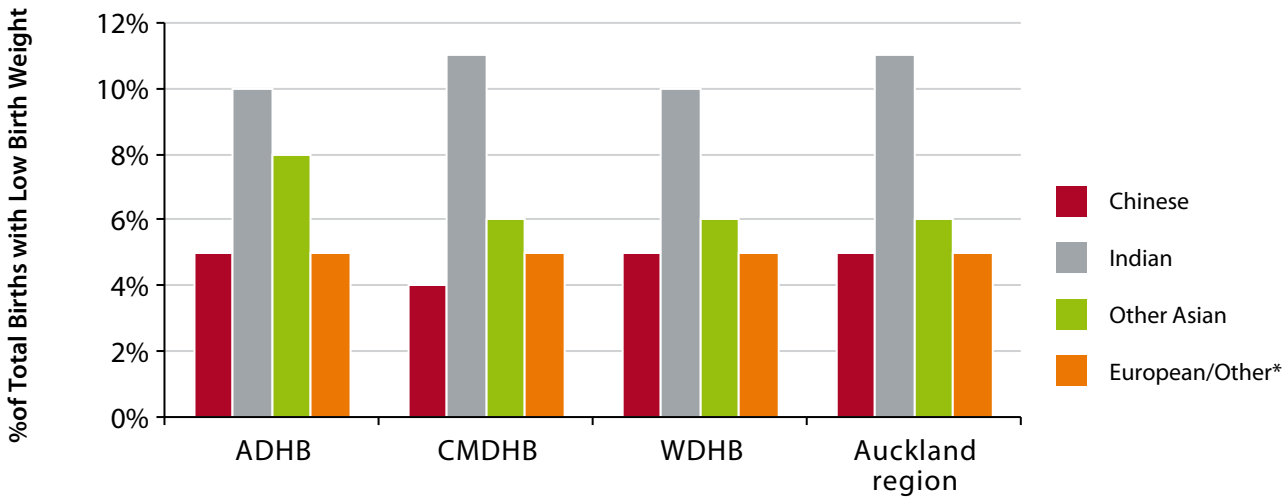
Table 54 and Figure 48 indicate that, in all areas examined, a greater percentage of Indian babies born between 2008 and 2010 had a birth weight below 2500 grams as compared to European/Other babies. The proportion of Chinese and Other Asian babies with low birth weight was similar to European/Other babies in all areas except ADHB, where a greater percentage of Other Asian babies had low birth weight as compared to their European/Other counterparts.

Table 54: Number and percentage of births (males and females combined) with low birth weight (<2500g) by prioritised ethnicity, 2008-2010

Ethnicity	ADHB			CMDHB			WDHB			Auckland region		
	No. Of Births <2500g	Total births	% LBW	No. Of Births <2500g	Total births	% LBW	No. Of Births <2500g	Total births	% LBW	No. Of Births <2500g	Total births	% LBW
Chinese	94	1,796	5%	49	1,183	4%	70	1,505	5%	213	4,484	5%
Indian	167	1,634	10%	210	1,841	11%	96	950	10%	473	4,425	11%
Other Asian	99	1,298	8%	52	945	6%	76	1,271	6%	227	3,514	6%
European/Other*	476	9,537	5%	394	7,690	5%	682	12,740	5%	1,552	29,697	5%

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 48: Percentage of births (males and females combined) with low birth weight (<2500g) by prioritised ethnicity, 2008-2010

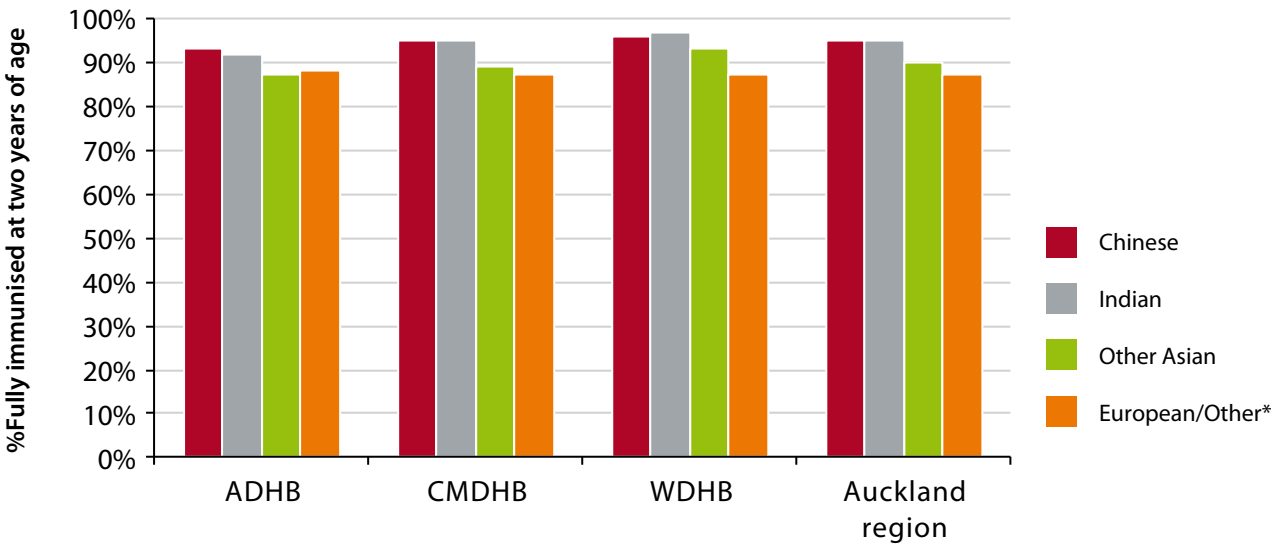


Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

14.4 Immunisation Coverage

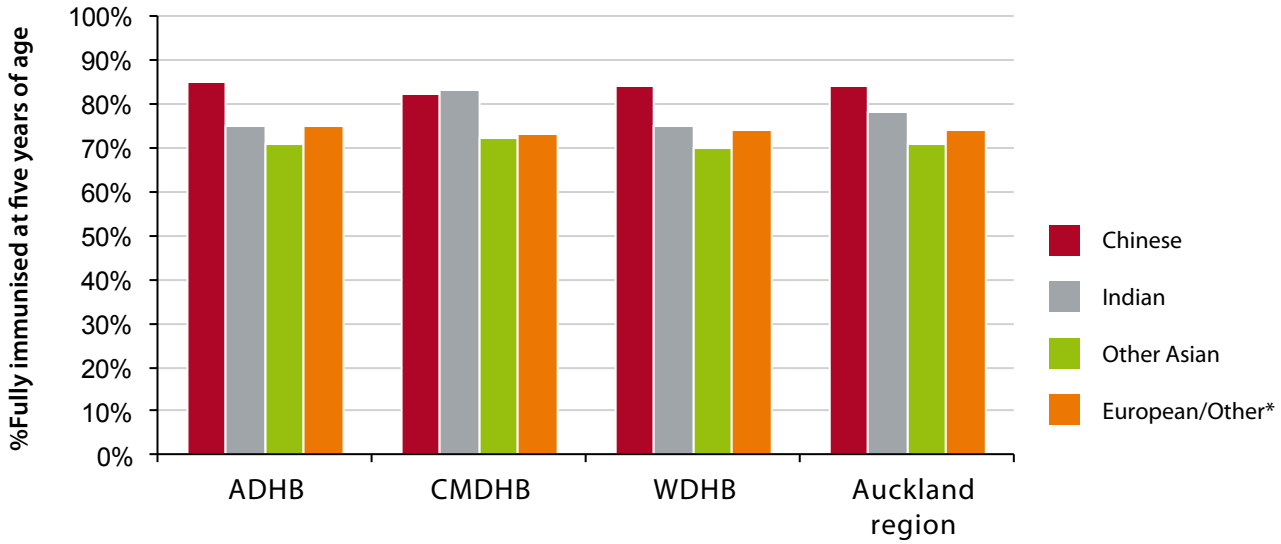
Figure 49 and Figure 50 presents data from the National Immunisation Register regarding children who reached two years and five years of age during 2010 and who were recorded as having received all age-appropriate immunisations. These data include children whose parents have elected to opt-off the immunisation schedule or who have declined specific immunisations. (M. Ghafel, personal communication, 2012).

Figure 49: Percentage of male and female children combined who were fully immunised at two years of age, 2010



Source: National Immunisation Register; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 50: Percentage of male and female children combined who were fully immunised at five years of age, 2010



Source: National Immunisation Register; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

All three Asian groups had similar or higher rates of being fully immunised at two years, and five years of age, as compared to European/Other children. Chinese children had the largest proportion of fully immunised children at both two years and five years among all the ethnic groups examined.

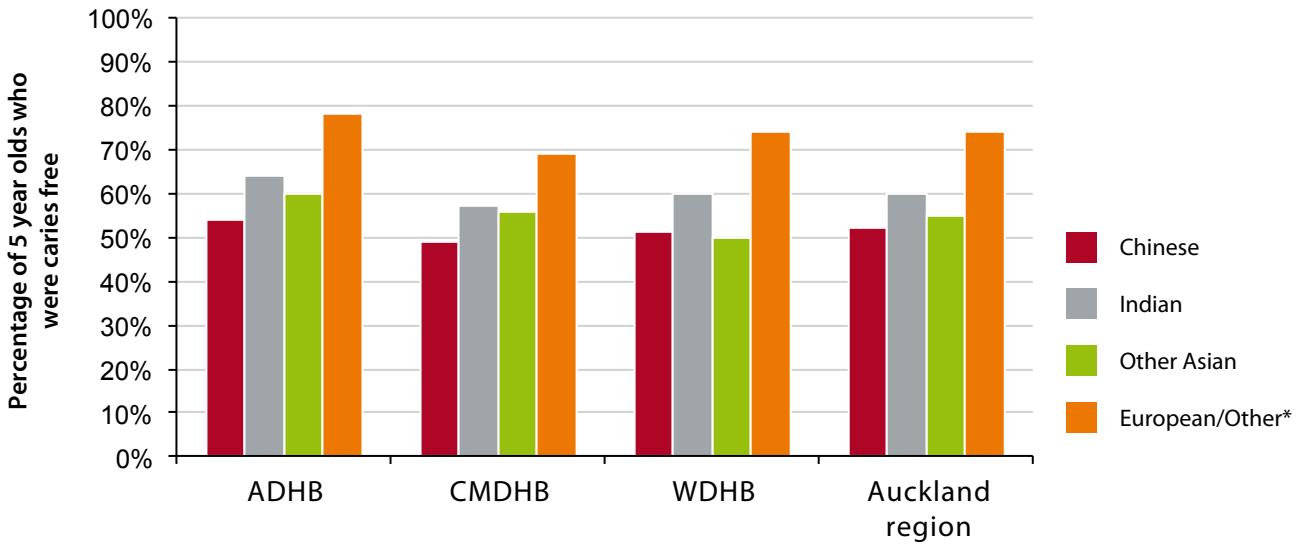
14.5 Oral Health

14.5.1 Oral Health in Five Year Olds and Year Eight Children

The Auckland Regional Dental Service (ARDS) provides free dental care for pre-school and school-aged children across Auckland up to Year eight (12 years of age). Dentition among five years olds is still primarily comprised of deciduous teeth, while 12 year old children generally have permanent adult teeth. The data presented below only include those children registered with ARDS.

Figure 51 indicates that a lower proportion of Asian five year olds across the three DHBs had caries-free teeth as compared to European/Other five year olds. Chinese five year olds had the worst oral health of the ethnic groups examined.

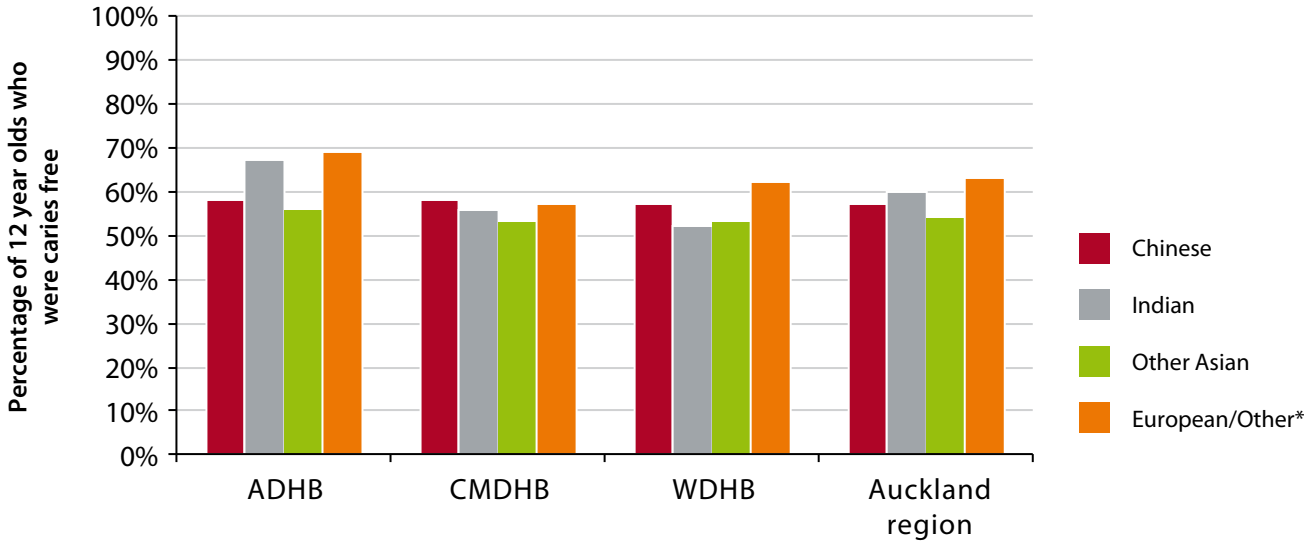
Figure 51: Proportion of five year olds (males and females combined) with caries-free teeth by prioritised ethnicity, 2011



Source: Auckland Regional Dental Service; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 52 indicates that while the proportion of Asian Year eight children who had caries-free teeth was lower across the three DHBs than for their European/Other counterparts, the differences across the ethnic groups examined were small.

Figure 52: Proportion of Year eight children (males and females combined) with caries-free teeth by prioritised ethnicity, 2011



Source: Auckland Regional Dental Service; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

It is unclear if poor child oral health is more of an issue among Asian migrant children and, if so, whether oral health issues are present on arrival in New Zealand or occur as a result of acculturation. (A. Mortensen, personal communication, 2012).

14.5.2 Hospitalisations for Dental Conditions

Hospitalisations among children are indicated for severe dental conditions, usually to enable tooth extraction under anaesthetic.

Table 55 presents the hospitalisation rates for dental conditions among Auckland children between 2008 and 2010. Other Asian children had a much higher rate as compared to European/Other children, and this was a significant difference. Indian children had a slightly greater rate of dental hospitalisations and Chinese children had a similar rate as compared to their European/Other counterparts.

Table 55: Age-standardised hospitalisation rate for dental conditions (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity among 0-14 year olds (males and females combined), 2008-2010

Ethnicity	Number	Rate per 100,000 (95%CI)
Chinese	236	434 (374-494)
Indian	311	504 (444-564)
Other Asian	407	773 (692-854)
European/Other*	1,659	428 (405-450)

Source: National Minimum Dataset; standard prioritised ethnicity
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

14.6 Youth Health

Apart from the data regarding terminations of pregnancy among teenagers in Auckland (presented in Section 15.2.2), no other Auckland-specific youth health data was available. However, the Youth '07 survey examined the health and wellbeing of secondary school students across New Zealand, including Asian students. This section summarises the key findings for Asian students from this survey.

Youth '07 was a cross-sectional survey conducted in 2007 among a representative sample of secondary school students from across the country. The survey was structured as an anonymous self-report questionnaire that was administered using handheld computers, and included a set of core questions used in the 2001 survey along with new questions addressing emerging health concerns. Of the 115 schools randomly selected from a pool of all eligible secondary schools in New Zealand, 96 schools agreed to be involved in the survey. From these schools, 12,549 students were randomly selected and invited to take part, and 9,107 students (or 72%) participated. Among these participants, 1,310 students or 14.4% of the total sample identified with an Asian ethnic group (Chinese 537, Indian 365, and Other Asian 408), 76% identified as NZ European, 19% identified as Maori, 13% identified with a Pacific ethnic group and 9% identified with other ethnic groups. Full details of the methodology employed are available on the study website (www.youth2000.ac.nz).[18]

Data for Chinese, Indian and Other Asian students from the Youth '07 survey were analysed separately for a report that was published in 2011.[18] Findings were presented separately for Chinese and Indian students where possible, as these were the two largest Asian ethnic groups in the survey. The following key findings were noted in this report:

- Positive family, home and school environments and positive relationships with adults at home and at school were reported by the majority of Asian students. Chinese and Indian students, however, were more likely than NZ European students to experience frequent house shifts, overcrowding, and unemployment among parents or other family hardships.
- Similar to 2001 findings, most Asian students reported positive and rewarding friendships. Around 40% identified spiritual beliefs as being important, and a similar proportion attended a place of worship regularly.
- Chinese and Indian students were more likely than NZ European students to report positive feelings about school. Improvement was noted for a number of school safety indicators since the previous survey in 2001, although a small proportion of Chinese and Indian students reported being bullied weekly or more frequently with many identifying their ethnicity as a factor in the bullying.
- Approximately 75% of Asian students were not eating enough fruit and vegetables to meet current national guidelines, and 91% did not fulfil current national guidelines to have one or more hours of physical activity each day. Compared to NZ European students, Indian students reported similar levels and Chinese students reported lower levels of physical activity.
- Both Chinese and Indian students were more likely than their NZ European counterparts to report not using contraception. The proportion of Chinese students reporting contraception use was unchanged since the 2001 survey but the corresponding proportion among Indian students had declined.
- Compared to the 2001 survey, the prevalence of ever smoking a cigarette and of smoking weekly or more often had decreased among Chinese students but both indicators remained relatively unchanged among Indian students.
- Alcohol consumption was less prevalent among Asian students, with only 35% of Chinese students and 34% of Indian students identifying as current drinkers compared to 66% of NZ European students. Indian and Chinese students were also less likely than their NZ European counterparts to binge drink, although 16% of Indian and Chinese students reported binge drinking on at least one occasion in the previous four weeks. Marijuana use had declined among Chinese but not among Indian students compared to the 2001 survey findings.
- Almost all Asian students reported good health. However, a number of barriers to accessing health care when required were reported by many Asian students, including lack of knowledge of the New Zealand health system, associated costs and transport difficulties. Mental health concerns were a particular issue among Asian youth, especially female students. Significant depressive symptoms were reported by 18% of females and 7-8% of male Chinese and Indian students, and these proportions were similar to those noted in the 2001 survey.

14.7 Summary of Child Health

Mortality

The infant mortality rate represents the number of infants who die in their first year of life, per thousand live births. There were no significant differences between the infant mortality rates of the three Asian groups examined and European/Other infants.

There were no significant differences in the rate of deaths from all causes among Auckland children aged 0 to 14 years belonging to the three Asian groups as compared to European/Other children.

Child (0-14 years) Potentially Avoidable Hospitalisations

Across the Auckland region, Chinese boys aged 0 -14 years had a significantly lower rate of potentially avoidable hospitalisations (PAH) as compared to European/Other children, but there were no significant differences between the PAH rates of Indian, Other Asian and European/Other boys.

Among girls aged 0 to 14 years, Chinese girls had a significantly lower PAH rate as compared to both European/Other and Indian girls, and a lower rate as compared to Other Asian girls although this difference was not significant. There were no significant differences in the PAH rate of Indian, Other Asian and European/Other girls across Auckland.

The top three causes of PAH among children from each of the ethnic groups examined were ENT infections, dental conditions or asthma. The PAH rates for both dental conditions and asthma among Other Asian and Indian children were significantly higher than among their European/Other counterparts.

Low Birth Weight

In all areas examined, a greater percentage of Indian babies born between 2008 and 2010 had a birth weight below 2500 grams as compared to European/Other babies. The proportion of Chinese and Other Asian babies with low birth weight was similar to European/Other babies in all areas except ADHB, where a greater percentage of Other Asian babies had low birth weight as compared to their European/Other counterparts.

Immunisation Coverage

Chinese, Indian and Other Asian children had similar or higher rates of being fully immunised at two years, and five years of age, as compared to European/Other children. Chinese children had the largest proportion of fully immunised children at both two years and five years among all the ethnic groups examined.

Oral Health

Auckland Regional Dental Service data indicates that a lower proportion of Chinese, Indian and Other Asian five year olds across the three DHBs had caries-free teeth as compared to European/Other five year olds. Chinese five year olds had the worst oral health of the ethnic groups examined. Although the proportion of Asian Year eight children that had caries-free teeth was lower across the three DHBs than for their European/Other counterparts, the differences across the ethnic groups examined were small.

Among Auckland children between 2008 and 2010, Other Asian children had a significantly higher hospitalisation rate for dental conditions as compared to European/Other children. Indian children had a slightly greater rate of dental hospitalisations and Chinese children had a similar rate as compared to their European/Other counterparts.

Youth Health

Other than data regarding terminations of pregnancy among teenagers, Auckland-specific youth health data are not currently available. However, an analysis of data for Asian students participating in the Youth '07 survey, which examined the health and wellbeing of secondary school students across New Zealand, was published in 2011. Most Asian students reported positive family home and school environments, positive and rewarding friendships and adult relationships, and about 40% noted the importance of spiritual beliefs. Most Asian students, however, did not meet current national guidelines for adequate intake of fruit and vegetables or daily physical activity, and were less likely than NZ European students to report using contraception. The prevalence of smoking had decreased among Chinese students but not among Indian students compared to the 2001 survey, and Chinese and Indian students were less likely to be current drinkers or to binge drink than their NZ European counterparts. Mental health problems, particularly depression, were a particular concern among the Asian secondary school student population, and while most Asian students reported good health, a number of barriers to accessing health care when required were noted, including lack of knowledge of the health system, as well as cost and transport issues.

15. Women's Health

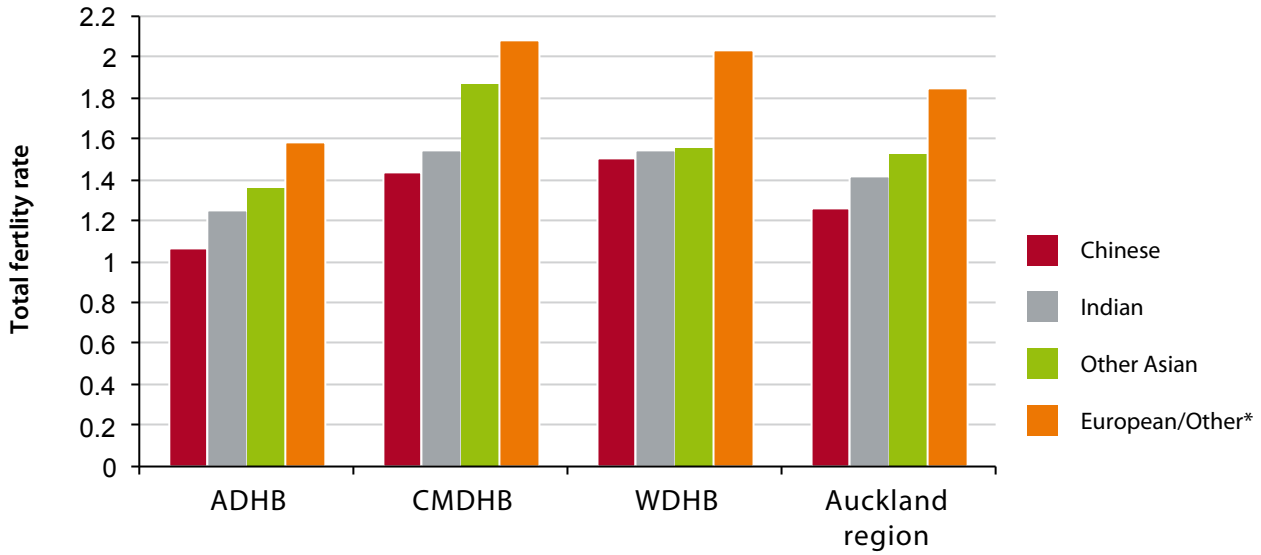
This section presents data regarding the following aspects of women's health:

- Total fertility rate
- Deliveries
- Pregnancy complications
- Termination of pregnancy
- Sexually transmitted infections
- Hysterectomies.

15.1 Total Fertility Rate

The total fertility rate (TFR) is defined as the average number of live births that a woman would deliver during her reproductive lifetime (15-44 years) if she corresponded to the fertility rate of a particular period of time. Figure 53 presents the TFR in Auckland by ethnic group if Auckland women conformed to the fertility rates of 2009. Asian groups had lower TFRs than European/Other women in all areas examined, and Chinese women had the lowest TFRs of the ethnic groups examined.

Figure 53: Total fertility rate by prioritised ethnicity for women aged 15-44 years, 2009



Source: Statistics New Zealand; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

15.2 Deliveries (live births)

15.2.1 Number and Age-standardised Rate of Live Births

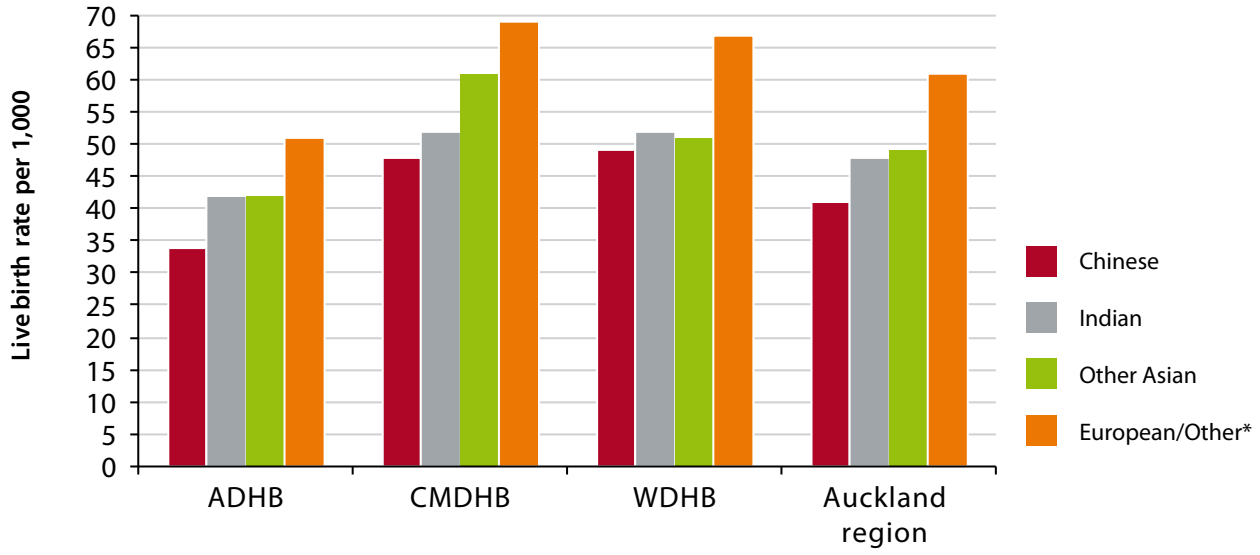
Table 56 and Figure 54 indicate that ADHB had lower rates of live births across all the ethnic groups examined than CMDHB and WDHB. All three Asian groups had lower rates of live births than their European/Other counterparts, and these differences were significant irrespective of the ethnic group or area examined. Chinese women had the lowest rate of live births in each DHB, which reflects the lower total fertility rate among Chinese women (section 15.1) It is probable that the data presented in the remainder of section 15.2, which indicates that Chinese women generally had the lowest rates of teenage, assisted and caesarean section deliveries, also reflect the low rate of live births among Chinese women.

Table 56: Number of live births and age-standardised rate of live births born to women aged 15-44 years (per 1,000 with 95% CI) by prioritised ethnicity, 2008-2010

Ethnicity	ADHB		CMDHB		WDHB		Auckland region	
	Number	Rate per 1,000 (95%CI)	Number	Rate per 1,000 (95%CI)	Number	Rate per 1,000 (95%CI)	Number	Rate per 1,000 (95%CI)
Chinese	1,792	34 (32-35)	1,179	48 (45-51)	1,439	49 (46-51)	4,410	41 (40-42)
Indian	1,581	42 (40-45)	1,700	52 (50-55)	919	52 (49-56)	4,200	48 (47-50)
Other Asian	1,236	42 (40-45)	942	61 (57-65)	1,350	51 (48-54)	3,528	49 (47-50)
European/Other*	9,271	51 (49-52)	7,165	69 (67-71)	13,255	67 (66-68)	29,691	61 (60-61)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 54: Age-standardised rate of live births born to women aged 15-44 years (per 1,000) by prioritised ethnicity, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

15.2.2 Teenage Deliveries

The rate of teenage deliveries (in women aged 15-19 years) is influenced by the effectiveness of sexual and family planning education received by youth. Table 57 presents data relating to teenage deliveries in Auckland by ethnic group. Due to the small numbers of deliveries for Asian ethnic sub-groups, data have been aggregated for the three DHBs in Auckland.

Teenage deliveries occurred at significantly lower rates among the three Asian groups as compared to European/Other teenagers. The lowest rates were noted among Chinese teenagers, and there were no significant differences between the teenage delivery rates of Indians and Other Asians.

Table 57: Number and age-specific rate of deliveries (rate per 100,000 with 95% CI) among teenage women aged 15-19 years across the Auckland region by prioritised ethnicity, 2008-2010

Ethnicity	Number	Rate per 100,000 (95%CI)
Chinese	15	110 (53 – 166)
Indian	51	539 (383 – 696)
Other Asian	75	621 (476 – 766)
European/Other*	1,000	1,353 (1,265 – 1,441)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

15.2.3 Assisted Deliveries

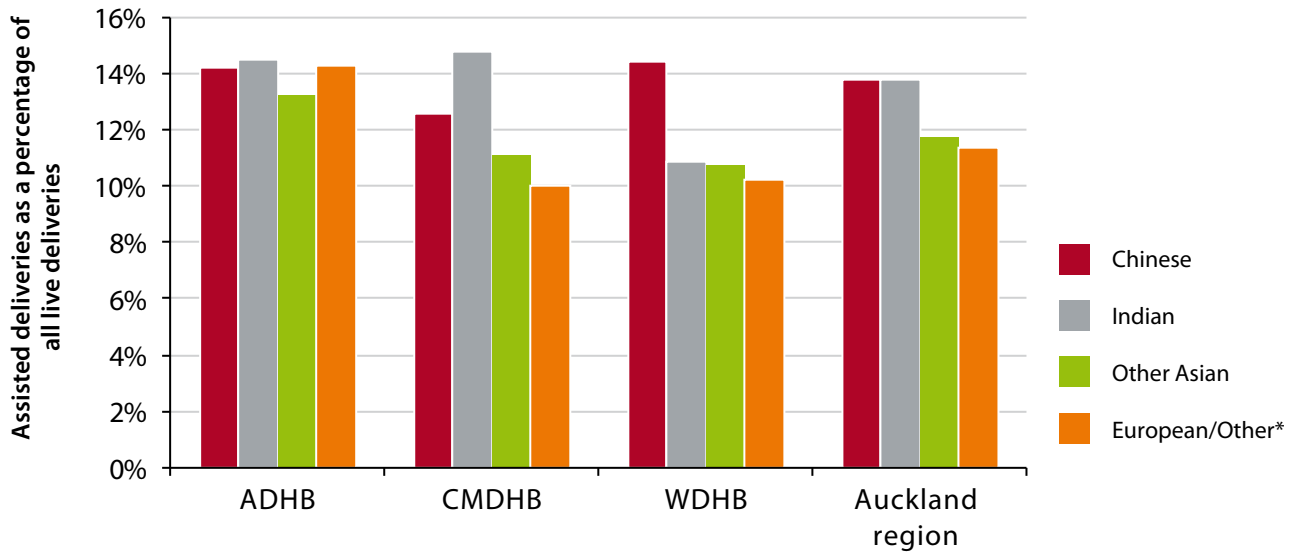
Occasionally, vaginal deliveries require some form of assistance such as ventouse or forceps to facilitate delivery. Compared to European/Other women of reproductive age, Table 58 and Figure 55 indicate that a similar proportion of deliveries were assisted across the ethnic groups examined in ADHB. Compared to European/Other women, all three Asian-subgroups in CMDHB and Chinese women in WDHB had a higher proportion of live deliveries that were assisted, and Chinese and Indian women had higher proportions when the whole Auckland region was considered.

Table 58: Number and percentage of all live deliveries that were assisted deliveries among women aged 15-44 years by prioritised ethnicity, 2008-2010

Ethnicity	ADHB		CMDHB		WDHB		Auckland region	
	No.	Percentage of all live deliveries	No.	Percentage of all live deliveries	No.	Percentage of all live deliveries	No.	Percentage of all live deliveries
Chinese	254	14.2%	148	12.6%	207	14.4%	609	13.8%
Indian	230	14.5%	251	14.8%	100	10.9%	581	13.8%
Other Asian	163	13.2%	105	11.1%	144	10.7%	412	11.7%
European/Other*	1,322	14.3%	718	10.0%	1,354	10.2%	3,394	11.4%

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 55: Assisted deliveries as a percentage of all live deliveries among women aged 15-44 years by prioritised ethnicity, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

15.2.4 Publically-funded Caesarean Sections

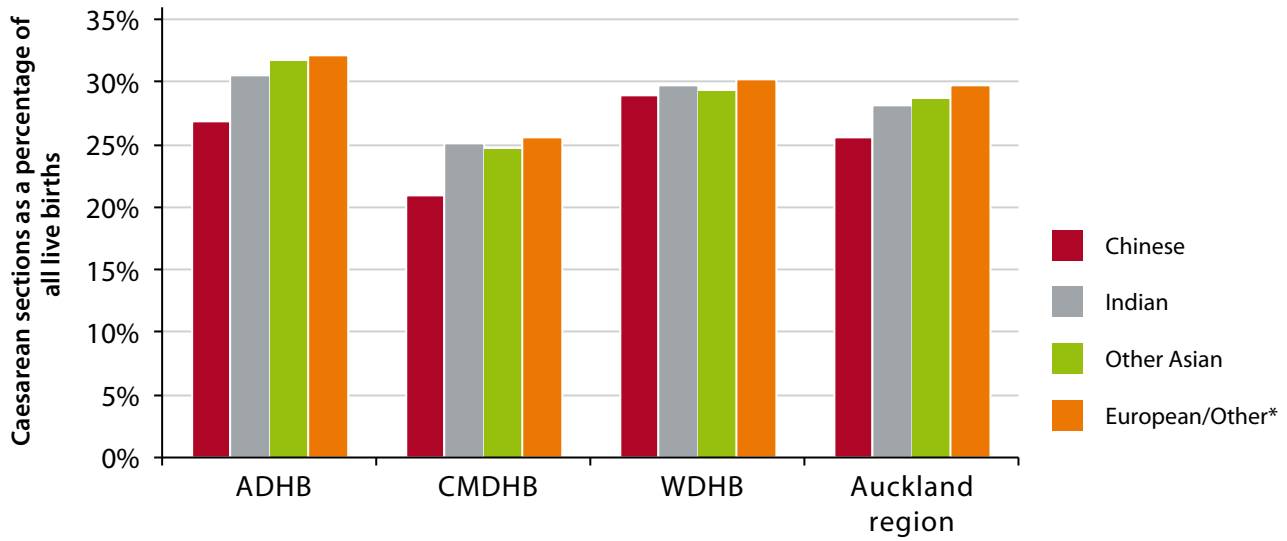
Table 59 and Figure 56 indicate that the proportion of live deliveries that resulted in publically-funded caesarean sections was similar among Indian, Other Asian and European/Other women aged 15-44 years in all three DHBs. A slightly lower proportion of caesarean sections were performed among Chinese women of reproductive age in ADHB and CMDHB as compared to their European/Other counterparts. Data regarding caesarean sections performed in the private sector were not available.

Table 59: Number and percentage of all live deliveries that were delivered by caesarean section among women aged 15-44 years by prioritised ethnicity, 2008-2010

Ethnicity	ADHB		CMDHB		WDHB		Auckland region	
	No.	Percentage of all live deliveries	No.	Percentage of all live deliveries	No.	Percentage of all live deliveries	No.	Percentage of all live deliveries
Chinese	463	26.8%	247	20.9%	417	28.9%	1,127	25.6%
Indian	484	30.6%	426	25.1%	274	29.8%	1,184	28.2%
Other Asian	386	31.2%	232	24.6%	394	29.2%	1,012	28.7%
European/Other*	2,973	32.1%	1,833	25.6%	4,007	30.2%	8,813	29.7%

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 56: Caesarean sections as a percentage of all live deliveries among women aged 15-44 years by prioritised ethnicity, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

15.3 Pregnancy complications

15.3.1 Pre-eclampsia

Chinese women of reproductive age had the lowest proportion of live deliveries complicated by pre-eclampsia among the ethnic groups examined. Compared to European/Other women, Indian women had a slightly higher proportion and Other Asian women had a similar proportion of deliveries complicated by pre-eclampsia. (Table 60)

Table 60: Number and percentage of deliveries complicated by pre-eclampsia among women aged 15-44 years across the Auckland region by prioritised ethnicity, 2008-2010

Ethnicity	Number	Percentage of all live deliveries
Chinese	27	0.6%
Indian	98	2.3%
Other Asian	43	1.2%
European/Other*	466	1.6%

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

15.3.2 Ectopic Pregnancies

Table 61 indicates that the rate of hospitalisation for ectopic pregnancies was lower among Chinese women as compared to European/Other women and this was a significant difference. However, there were no significant differences in the rates of Indian, Other Asian and European/Other women.

Table 61: Age-standardised hospitalisation rate for ectopic pregnancies (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity among females aged 15-44 years, 2008-2010

Ethnicity	Number	Rate per 100,000 (95%CI)
Chinese	78	74 (55-92)
Indian	97	109 (82-136)
Other Asian	69	92 (64-120)
European/Other*	544	112 (100-124)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

15.3.3 Diabetes in Pregnancy

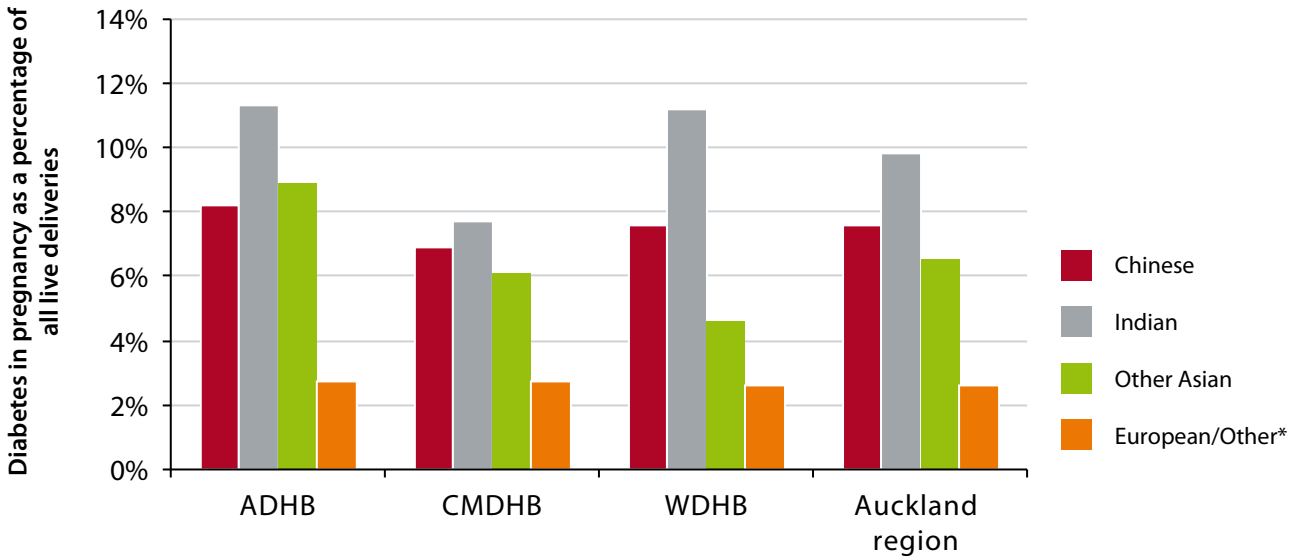
Table 62 and Figure 57 indicate that the proportion of live deliveries complicated by diabetes in pregnancy was higher among women from all three Asian groups in every area examined as compared to European/Other women, with the highest proportions among Indian women.

Table 62: Number and percentage of all live deliveries complicated by diabetes in pregnancy among women aged 15 - 44 years by prioritised ethnicity, 2008-2010

Ethnicity	ADHB		CMDHB		WDHB		Auckland region	
	No.	Percentage of all live deliveries	No.	Percentage of all live deliveries	No.	Percentage of all live deliveries	No.	Percentage of all live deliveries
Chinese	147	8.2%	80	6.9%	109	7.6%	336	7.6%
Indian	179	11.3%	131	7.7%	103	11.2%	413	9.8%
Other Asian	110	8.9%	57	6.1%	62	4.6%	229	6.5%
European/Other*	247	2.7%	184	2.7%	351	2.6%	782	2.6%

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 57: Diabetes in pregnancy as a percentage of all live deliveries among women aged 15 -44 years by prioritised ethnicity, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

15.4 Terminations of pregnancy

This section presents data regarding terminations of pregnancy in the public and private sector. The rates presented below for women aged 10-44 years are not age-standardised, which may lead to spurious differences in rates across the ethnic groups examined. Other issues specific to each set of data have been noted below.

15.4.1 Public – Epsom Day Unit

The Epsom Day Unit provides publically-funded termination of pregnancy (TOP) in the first trimester throughout the Auckland region. Data were unavailable for individual DHBs in the Auckland region, for Chinese and Other Asian women separately or broken down by age group.

Table 63 indicates that the Asian groups comprise a lower proportion of the total number of terminations performed in the public sector as compared to European/Others, as would be expected given the much greater population counts of European/Others. However, while the rate of terminations among Chinese and Other Asian women combined was similar to their European/Other counterparts, Indian women had the highest rate of terminations of the ethnic groups examined.

Table 63: First trimester termination of pregnancy rate (per 1,000) in the public sector for women aged 10-44 years across the Auckland region by prioritised ethnicity, 2010

Ethnicity	% of total number of terminations	Rate per 1,000
Chinese and Other Asian	11%	5
Indian	10%	10
European/Other*	35%	4

Source: Epsom Day Unit; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

15.4.1 Private – Auckland Medical Aid Centre (AMAC)

The Auckland Medical Aid Centre offers termination of pregnancy in the private sector to women from across Auckland. DHB-specific data were provided according to the DHB of domicile of the women seeking termination of pregnancy in the first trimester.. There are two main limitations regarding calculation of rates for these data. Firstly, the rates are not age-standardised. Secondly, international students will be counted among the number of terminations of pregnancy (ie the numerator), but not among the estimated resident population projections (ie the denominator). This numerator/denominator mismatch is likely to have spuriously elevated rates for three Asian sub-groups, as almost all international students in Auckland are from Asian countries. The large number of Asian international students residing in ADHB is likely to have influenced the higher rates of terminations noted below across Chinese, Indian and Other Asian groups in ADHB as compared to European/Others and Asian sub-groups in other DHBs.

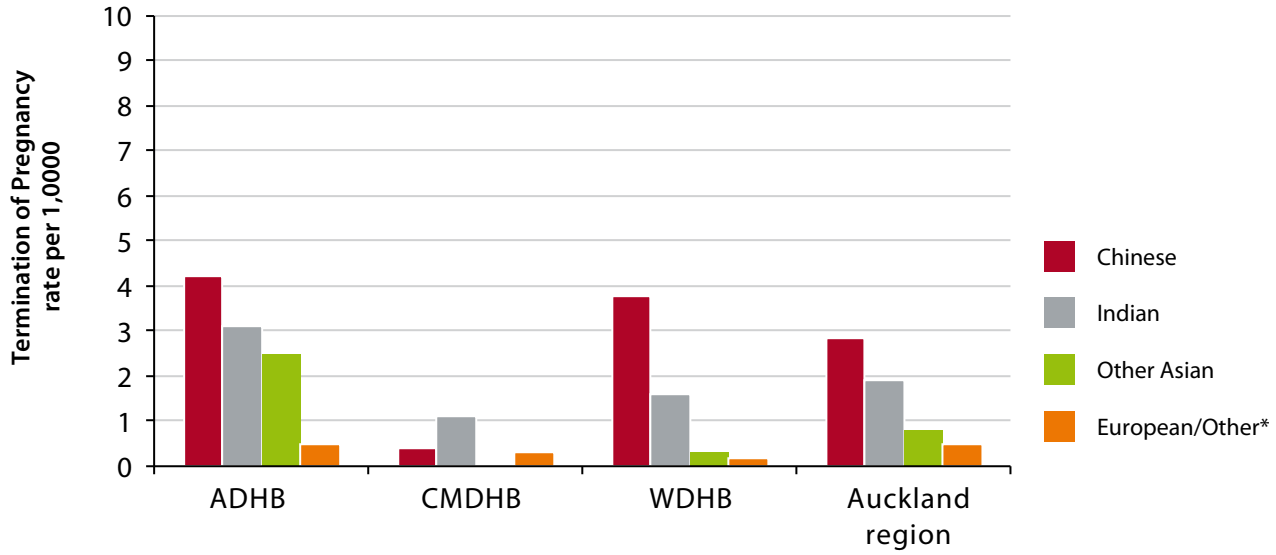
Table 64 and Figure 58 indicate that the absolute number of privately funded first trimester terminations for teenage women in 2010 was low, and therefore the resultant rates should be interpreted cautiously. Chinese teenagers had the highest rates of first trimester terminations in the private sector in all areas examined except CMDHB, where terminations were performed most frequently among Indian teenagers. With the exception of Other Asian teenagers in CMDHB, teenage women from all three Asian groups in all areas examined had higher rates of privately funded first trimester terminations than European/Other teenage women.

Table 64: First trimester termination of pregnancy rate (per 1,000) in the private sector for teenage women (10-19 years) by prioritised ethnicity, 2010

Ethnicity	ADHB		CMDHB		WDHB		Auckland region	
	No.	Rate per 1,000	No.	Rate per 1,000	No.	Rate per 1,000	No.	Rate per 1,000
Chinese	12	4.2	1	0.4	8	3.8	21	2.8
Indian	7	3.1	3	1.1	2	1.6	12	1.9
Other Asian	5	2.5	0	0	1	0.3	6	0.8
European/Other*	6	0.5	4	0.3	12	0.2	22	0.5

Source: Auckland Medical Aid Centre; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 58: First trimester termination of pregnancy rate (per 1,000) in the private sector for teenage women (10-19 years) by prioritised ethnicity, 2010



Source: Auckland Medical Aid Centre; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

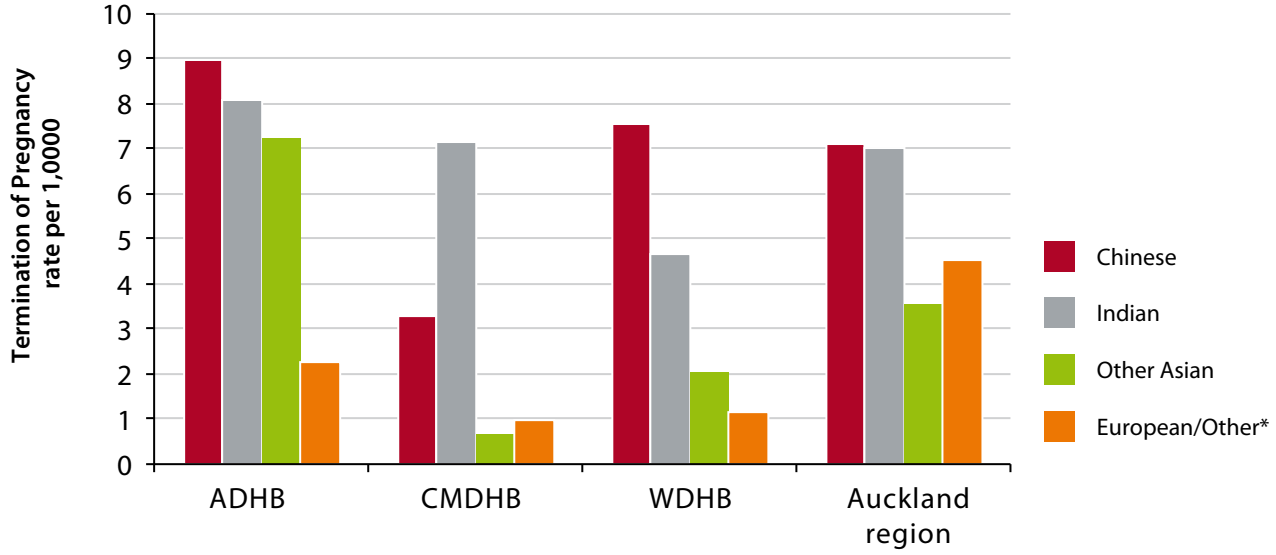
Table 65 and Figure 59 present the rates of privately-funded first trimester termination of pregnancy occurring in women aged 10-44 years across Auckland in 2010. Chinese and Indian women in all areas examined had higher rates of first trimester terminations than their European/Other counterparts. Other Asian women had higher rates of first trimester terminations as compared to European/Other women in ADHB and WDHB, but lower rates comparatively when the whole of the Auckland region was considered.

Table 65: First trimester termination of pregnancy rate (per 1,000) in the private sector for women aged 10-44 years by prioritised ethnicity, 2010

Ethnicity	ADHB		CMDHB		WDHB		Auckland region	
	No.	Rate per 1,000	No.	Rate per 1,000	No.	Rate per 1,000	No.	Rate per 1,000
Chinese	186	9.0	37	3.3	91	7.5	314	7.1
Indian	109	8.1	92	7.1	31	4.6	232	7.0
Other Asian	83	7.3	5	0.6	27	2.1	115	3.6
European/Other*	158	2.2	52	1.0	109	1.1	319	4.5

Source: Auckland Medical Aid Centre; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 59: First trimester termination of pregnancy rate (per 1,000) in the private sector for women aged 10-44 years by prioritised ethnicity, 2010



Source: Auckland Medical Aid Centre; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

15.5 Sexually Transmitted Infections

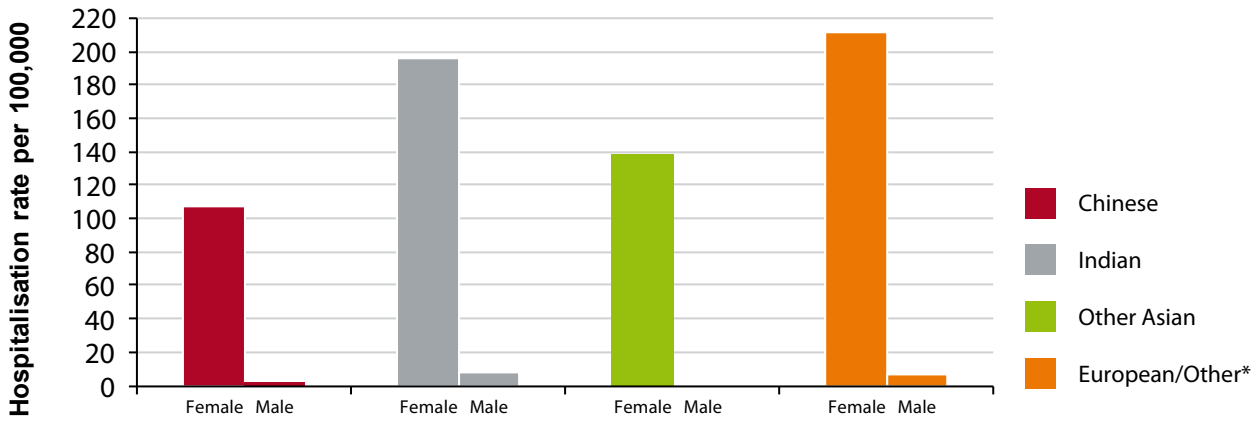
Table 66 and Figure 60 indicate that women have considerably higher hospitalisation rates for sexually transmitted infections within the Auckland region as compared to men, across all the ethnic groups examined. Data were not presented separately for each DHB as the number of hospitalisations among men was too small to allow this.

Table 66: Number and age-standardised hospitalisation rate for sexually transmitted infections among adults aged 15 years or older (per 100,000 with 95% CI) by prioritised ethnicity and sex, 2008-2010

Ethnicity	Male		Female	
	Number	Rate per 100,000 (95%CI)	Number	Rate per 100,000 (95%CI)
Chinese	3	2 (0-5)	181	107 (89-125)
Indian	10	8 (2-14)	248	196 (167-226)
Other Asian	0	0	168	139 (114-164)
European/Other*	61	7 (5-9)	1,720	212 (200-225)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 60: Age-standardised hospitalisation rate for sexually transmitted infections among adults aged 15 years or older (per 100,000 with 95% CI) by prioritised ethnicity and sex, 2008-2010



Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

There was no significant difference between the rates of Chinese and Other Asian women when compared to each other, but both had significantly lower rates when compared to their European/Other counterparts. There were no significant differences between the hospitalisation rates of Indian and European/Other women, or among men from all the ethnic groups examined.

15.6 Hysterectomies

Hysterectomies are a commonly performed gynaecological surgery, usually due to abnormal bleeding, endometriosis and less commonly for tumours. Table 67 presents the rate of hysterectomies among adult women across the Auckland region between 2008 and 2010. These data include only publically-funded procedures occurring in public and private hospitals, and will therefore undercount the true number of procedures that were performed during this period.

Table 67: Age-standardised rate of hysterectomy procedures (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity among females aged 15 years or older, 2008-2010

Ethnicity	Number	Rate per 100,000 (95%CI)
Chinese	67	44 (33-55)
Indian	142	135 (111-158)
Other Asian	111	106 (84-128)
European/Other*	1,131	94 (88-100)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Indian women had a significantly higher rate of hysterectomies as compared to European/Other women. This may reflect the high representation of uterine cancer among cancer registrations for Indian women. Other Asian women also had a higher rate of hysterectomies as compared to European/Other women, but this was not a significant difference. Chinese women had the lowest rates.

15.7 Summary of Women's Health

Total Fertility Rate

Asian groups had lower total fertility rates than European/Other women in all areas examined, and Chinese women had the lowest total fertility rates of the ethnic groups examined.

Deliveries

All three Asian groups had lower rates of live births than their European/Other counterparts, and these differences were significant irrespective of the ethnic group or area examined. Chinese women had the lowest rate of live births in each DHB.

Teenage deliveries occurred at significantly lower rates among the three Asian groups as compared to European/Other teenagers. The lowest rates were noted among Chinese teenagers.

A similar proportion of deliveries were assisted across the ethnic groups examined in ADHB. Compared to European/Other women, all three Asian-subgroups in CMDHB and Chinese women in WDHB had a higher proportion of live deliveries that were assisted, and Chinese and Indian women had higher proportions when the whole Auckland region was considered.

The proportion of live deliveries that resulted in publically-funded caesarean sections was similar among Indian, Other Asian and European/Other women aged 15-44 years in all three DHBs. A slightly lower proportion of caesarean sections were performed among Chinese women of reproductive age in ADHB and CMDHB as compared to their European/Other counterparts. Data regarding caesarean sections performed in the private sector were not available.

Pregnancy Complications

Chinese women of reproductive age had the lowest proportion of live deliveries complicated by pre-eclampsia among the ethnic groups examined. Compared to European/Other women, Indian women had a slightly higher proportion and Other Asian women had a similar proportion of deliveries complicated by pre-eclampsia.

Chinese women had a slightly lower (significant) rate of hospitalisation for ectopic pregnancies as compared to European/Other women, but there were no significant differences in the rates of Indian, Other Asian and European/Other women.

The proportion of live deliveries complicated by diabetes in pregnancy was higher among women from all three Asian groups in every area examined as compared to European/Other women, with the highest proportions among Indian women.

Terminations of Pregnancy

The rate of publically-funded first trimester terminations of pregnancy among Chinese and Other Asian women combined was similar to their European/Other counterparts. Indian women had the highest rate of publically-funded first trimester terminations of the ethnic groups examined.

Data for privately-funded first trimester terminations of pregnancy occurring in 2010 should be interpreted cautiously due to the inclusion of international students among the number of terminations (ie the numerator), but not among the estimated resident population projections (ie the denominator), the low absolute number of first trimester terminations for teenage women, and because the rates for women of all ages across Auckland could not be age-standardised. Chinese teenagers generally had the highest rates of first trimester terminations performed in the private sector. With the exception of Other Asian teenagers in CMDHB, teenage women from all three Asian groups in all areas examined had higher rates of privately-funded first trimester terminations than European/Other teenage women. Among women of all ages, Chinese and Indian women in each area examined had higher rates of privately-funded first trimester terminations than their European/Other counterparts. Other Asian women had higher rates of first trimester terminations in the private sector as compared to European/Other women in ADHB and WDHB, but lower rates comparatively when the whole of the Auckland region was considered.

Sexually Transmitted Infections

Across all the ethnic groups examined, women have much higher hospitalisation rates for sexually transmitted infections within the Auckland region as compared to men. Both Chinese and Other Asian women had significantly lower rates when compared to their European/Other counterparts, but there were no significant differences between the hospitalisation rates of Indian and European/Other women or among men from all the ethnic groups examined.

Hysterectomies

Indian women had a significantly higher rate of hysterectomies as compared to European/Other women. Other Asian women also had a higher rate of hysterectomies as compared to European/Other women, but this was not a significant difference. Chinese women had the lowest rates.

16. Other Surgical Interventions

In this section, data is presented for a range of key high-cost, high volume surgical interventions among adults which have not been covered in preceding sections. These are:

- Total hip joint replacements
- Total knee joint replacements
- Cholecystectomies
- Cataract extractions
- Prostatectomies.

Data have been aggregated for males and females and across the three Auckland DHBs, as the absolute numbers of people receiving these interventions is relatively small among Asian ethnic sub-groups. These data are for publically-funded procedures performed between 2008 and 2010 in public and private hospitals, and will therefore undercount the true number of procedures that occurred during this period.

16.1 Total Hip Joint Replacements

Table 68 indicates that there were no significant differences between the rate of publically-funded total hip joint replacements (THJR) undertaken among Chinese, Indian and Other Asian people, but the THJR rates of all three Asian groups were significantly lower as compared to their European/Other counterparts. The number of publically-funded THJR performed among Asian people was small.

Table 68: Age-standardised rate of total hip joint replacements (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity among people aged 15 years or older (males and females combined), 2008-2010

Ethnicity	Number	Rate per 100,000 (95%CI)
Chinese	30	13 (8-18)
Indian	30	19 (11-27)
Other Asian	16	17 (7-27)
European/Other*	2,743	94 (90-98)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

16.2 Total Knee Joint Replacements

As for THJR, the number of total knee joint replacements (TKJR) performed on Asian people was small. Indian people across Auckland had a significantly higher rate of TKJR as compared to the other three ethnic groups examined. Both Other Asian and Chinese people had a significantly lower TKJR rate as compared to their European/Other counterparts. (Table 69)

Table 69: Age-standardised rate of total knee joint replacements (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity among people aged 15 years or older (males and females combined), 2008-2010

Ethnicity	Number	Rate per 100,000 (95%CI)
Chinese	48	20 (14-25)
Indian	193	143 (119-167)
Other Asian	38	50 (30-69)
European/Other*	2,408	83 (79-86)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

16.3 Cholecystectomies

No significant differences were found between the rates of cholecystectomies performed among Other Asian and European/Other people. A significantly lower rate of cholecystectomies was performed among Indian people as compared to their European/Other counterparts and the lowest rates were noted among Chinese people.

Table 70: Age-standardised rate of cholecystectomy procedures (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity among people aged 15 years or older (males and females combined), 2008-2010

Ethnicity	Number	Rate per 100,000 (95%CI)
Chinese	149	53 (45-62)
Indian	215	98 (84-112)
Other Asian	167	117 (96-137)
European/Other*	2,743	123 (119-128)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

16.4 Cataract Extractions

Table 71 indicates that significantly higher rates of cataract extractions were performed among all three Asian groups as compared to their European/Other counterparts. Indian people had the highest rates of cataract extractions performed, followed by Other Asian people and this may reflect the prevalence of diabetes among these communities.

Table 71: Age-standardised rate of cataract extractions (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity among people aged 15 years or older (males and females combined), 2008-2010

Ethnicity	Number	Rate per 100,000 (95%CI)
Chinese	674	283 (257-309)
Indian	807	608 (556-659)
Other Asian	401	503 (443-562)
European/Other*	7,204	217 (211-223)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

16.5 Prostatectomies

The main indications for prostatectomy are benign prostatic hyperplasia that is unresponsive to medical or minimally invasive options, and prostate cancer. Prostate cancer was the leading cause of cancer registration among all ethnic groups considered in Table 34, though the highest rates were observed among European/Other men. Table 72 presents prostatectomy rates among men across the Auckland region between 2008 and 2010 by ethnic group.

Table 72: Age-standardised rate of prostatectomy procedures (per 100,000 with 95% CI) across the Auckland region by prioritised ethnicity among males aged 15 years or older, 2008-2010

Ethnicity	Number	Rate per 100,000 (95%CI)
Chinese	69	56 (42-70)
Indian	61	90 (65-115)
Other Asian	23	66 (36-95)
European/Other*	1,280	91 (86-97)

Source: National Minimum Dataset; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Compared to European/Other men, the rates of prostatectomies were significantly lower among Chinese, lower among Other Asian men and similar among Indian men.

16.6 Summary of Other Surgical Interventions

Total Hip Joint Replacements

There were no significant differences between the rate of publically-funded THJR undertaken among Chinese, Indian and Other Asian people, but the THJR rates of all three Asian groups were significantly lower as compared to their European/Other counterparts.

Total Knee Joint Replacements

Indian people across Auckland had a significantly higher rate of TKJR as compared to the other three ethnic groups examined. Both Other Asian and Chinese people had a significantly lower TKJR rates as compared to their European/Other counterparts.

Cholecystectomies

No significant differences were found between the rates of cholecystectomies performed among Other Asian and European/Other people. A significantly lower rate of cholecystectomies was performed among Indian people as compared to their European/Other counterparts and the lowest rates were noted among Chinese people.

Cataract Extractions

Significantly higher rates of cataract extractions were performed among all three Asian groups examined as compared to their European/Other counterparts. Indian people had the highest rates of cataract extractions performed, followed by Other Asian people.

Prostatectomies

Across the Asian ethnic sub-groups, the rates of prostatectomy procedures were lower among Chinese and Other Asian men and similar among Indian men as compared to European/Other men.

17. Disability

The World Health Organisation has adopted the conceptual framework used by *The International Classification of Functioning, Disability and Health* (ICF) which defines disability as an umbrella term for impairments, activity limitations, and participation restrictions. Disability refers to the negative aspects of the interaction between individuals with a health condition (such as cerebral palsy, Down's syndrome or depression) and personal and environmental factors (such as negative attitudes, inaccessible transportation and public buildings, and limited social supports).[58]

This section presents the available data regarding the prevalence of disabilities among Asian people, and access to disability services in Auckland.

17.1 Prevalence of Disabilities among Asian people across New Zealand

Data regarding the prevalence of disabilities among Asian people in Auckland are not currently available. The most recent New Zealand Household Disability Survey was conducted in 2006 and collected national data regarding the prevalence of disabilities among Asian people, but did not collect data separately for Chinese, Indian and Other Asian groups. This survey used the previous definition of disability adopted by the World Health Organisation, which defined disability as any restriction or lack (resulting from impairment) of ability to perform an activity in the manner or within the range considered normal for a human being. [59] A standard prioritised classification was used to group ethnic data.

The usually resident population of New Zealand was the target population for the survey. Statistics New Zealand selected 40,665 people for inclusion, and the response rate was 81 percent. The total number of respondents with disabilities was 7,059. These were: 1,988 children, 3,180 adults aged 15 to 64 years, and 1,891 older adults aged 65 years and over.

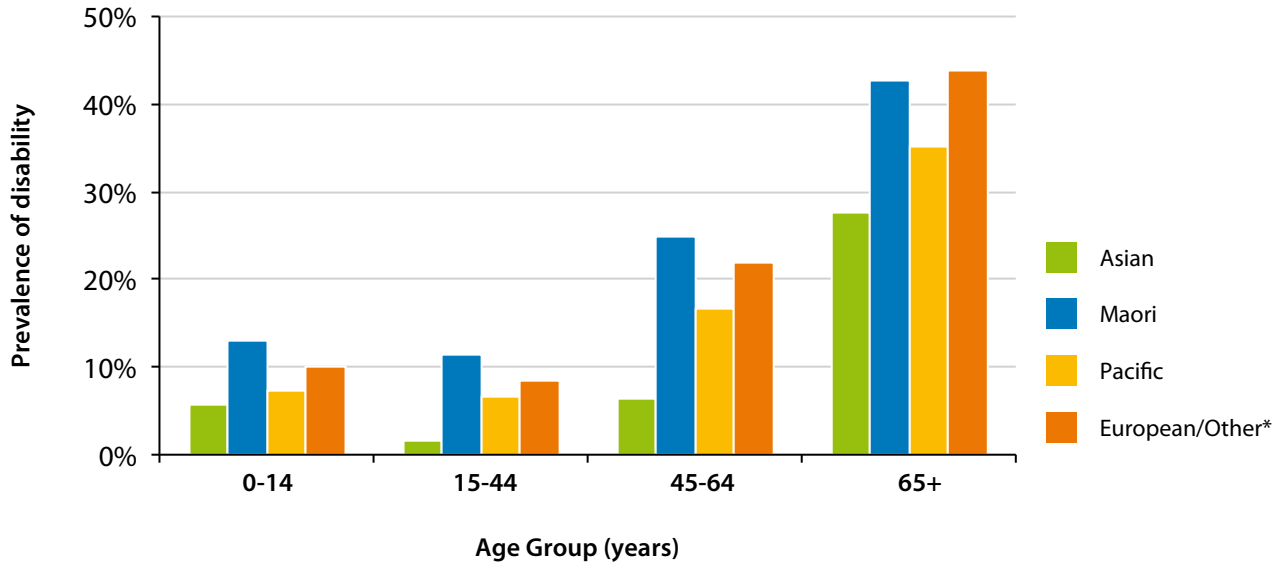
National disability prevalence estimates derived from the survey data are presented in Table 73 and Figure 61. Across all age groups, Asian people in New Zealand had the lowest prevalence of reported disability of the ethnic groups examined. This finding may be partially attributable to the 'healthy migrant effect'. However, as discussed in section 21 by health service providers, disability is associated with considerable stigmatisation, and is therefore also likely to be under-reported, among Asian communities.

Table 73: Number and proportion of people with disability in New Zealand, by prioritised ethnicity and age group, 2006

Ethnicity	0-14 years		15-44 years		45-64 years		65+ years	
	Number with disability	% with disability	Number with disability	% with disability	Number with disability	% with disability	Number with disability	% with disability
Asian	4,300	6	3,300	1	4,600	6	5,000	28
Maori	28,200	13	33,000	12	24,300	25	11,000	43
Pacific	6,100	7	8,100	7	6,600	17	4,000	35
European/Other*	51,400	10	97,100	8	173,000	22	200,200	44

Source: New Zealand Household Disability Survey; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 61: Proportion of people with disability in New Zealand, by prioritised ethnicity and age group, 2006



Source: New Zealand Household Disability Survey; standard prioritised ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

17.2 Access to Disability Services in Auckland

Since 2002, Taikura Trust is the organisation that has been funded by the Ministry of Health to provide needs assessment and service coordination (NASC) to disabled people under the age of 65 years in the Auckland region. Prior to 2002, NASC services were delivered by five separate organisations across Auckland.[60]

This section provides data regarding the ethnic breakdown of Taikura Trust clients. Taikura Trust categorises ethnicity data according to total response ethnicity, so clients can identify with more than one ethnic group. Data were not available separately for Asian sub-groups. The rates and numbers presented are approximate for two reasons. Firstly, data were only available separately for the European and Other groups but had to be amalgamated as the denominator population data that was utilised does not have separate population counts for European and Other groups in Auckland. This may lead to a small degree of 'double-counting' of European/Other individuals which would slightly inflate the rates obtained for this ethnic group. Secondly, 2011 population estimates for total response ethnicity that are also broken down by age, sex and DHB are not available, so standard prioritised population counts were used as the denominator population. This numerator/denominator bias is less of an issue for the Maori group as the total response and standard prioritised counts would be similar given that people identifying with the Maori ethnic group are prioritised first. The rates obtained for the three other ethnic groups, though, would be slightly inflated by the use of standard prioritised counts. On the other hand, the number of people identifying with more than one ethnic group was very small (approximately 340 out of 11,549) so the degree of error in the estimates presented is likely to be small.

17.2.1 Total Active Users of Taikura Trust

There were 11,549 active users of Taikura Trust recorded as at 30 June 2011. Table 74 presents the ethnic breakdown of these active users. Please note that people could identify with more than one ethnic group. The rate of Asian people across Auckland using disability services was less than half the rate of the three other ethnic groups examined.

Table 74: Total active users of Taikura Trust in the Auckland region by total response ethnicity, as at 30 June 2011

Ethnicity	Number	Rate per 100,000
Asian	1067	342
Maori	1489	869
Pacific	1912	965
European/Other*	7503	941
TOTAL	**11,971**	

Source: Taikura Trust; total response ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

17.2.2 Users of Taikura Trust assessed in the 2010/2011 Financial Year

Of the 11,549 active users of Taikura Trust as at 30 June 2011, more detailed data broken down by DHB of domicile, sex, age and type of disability were available for 10,185 people who were assessed between 1 July 2010 and 30 June 2011. No data were available regarding the country of birth or the amount of time spent in New Zealand.

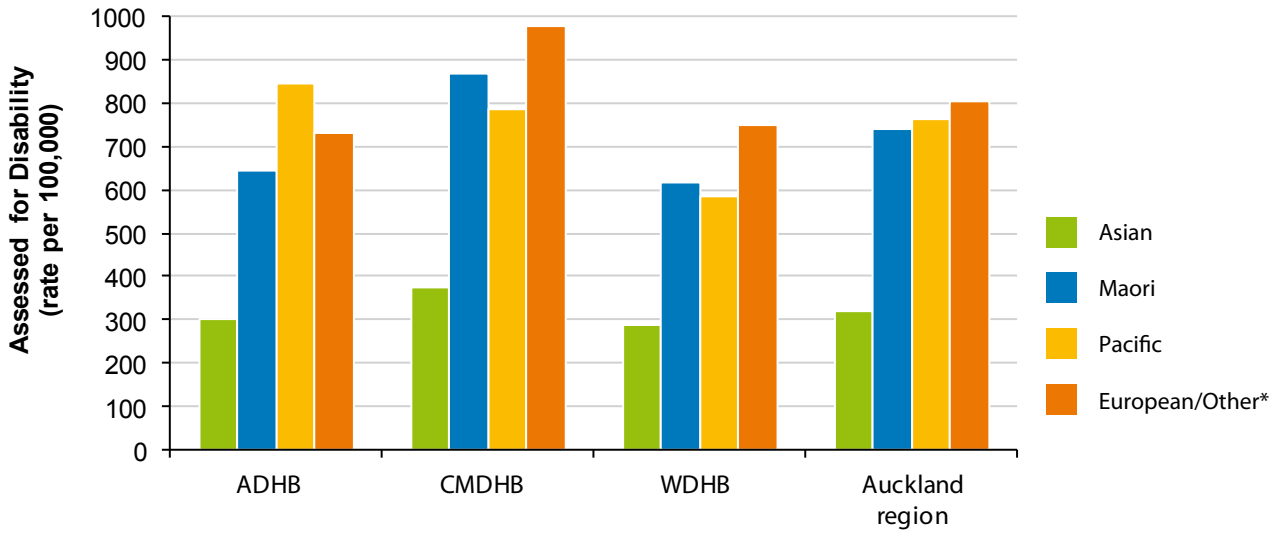
Table 75 and Figure 62 indicate that among users assessed during the 2010/2011 financial year, the rate of Asian people (per 100,000 people) assessed for access to Taikura Trust services was less than half the rates of the other three ethnic groups examined in each of the DHBs and across the Auckland region.

Table 75: Taikura Trust users assessed during the 2010/2011 financial year by total response ethnicity and DHB

Ethnicity	ADHB		CMDHB		WDHB		Auckland region	
	No.	Rate per 100,000	No.	Rate per 100,000	No.	Rate per 100,000	No.	Rate per 100,000
Asian	376	303	361	372	262	288	999	320
Maori	233	644	714	867	325	615	1272	742
Pacific	437	844	851	786	222	583	1510	762
European/Other*	1,747	731	1,987	980	2,670	750	6,404	803

Source: Ministry of Health; total response ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 62: Taikura Trust users assessed during the 2010/2011 financial year by total response ethnicity and DHB



Source: Ministry of Health; total response ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

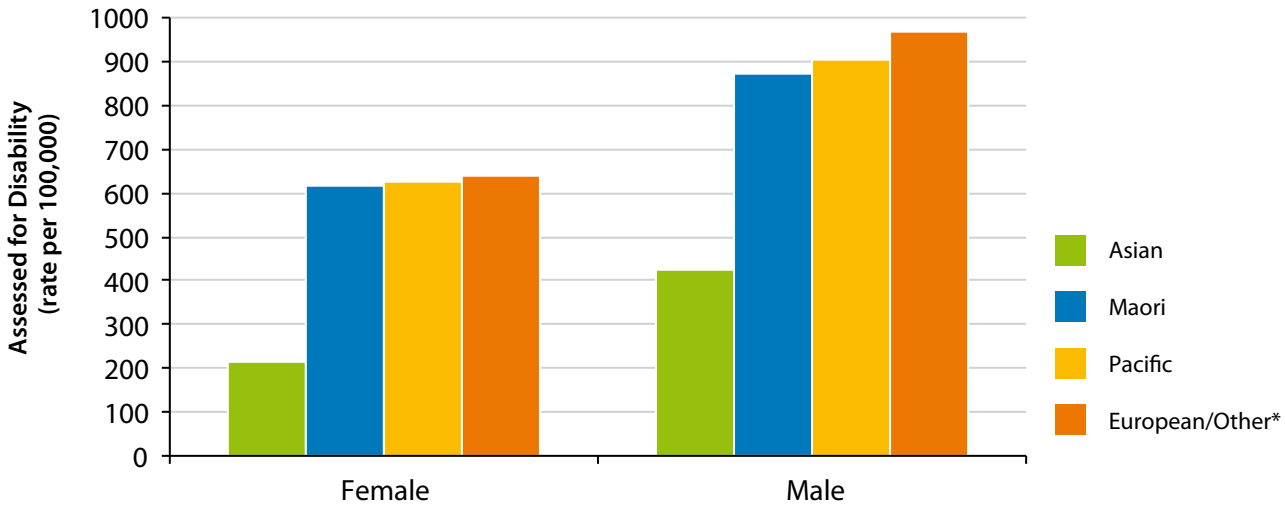
Among both men and women, the rate of Asians assessed (per 100,000 people) by Taikura Trust during the 2010/2011 financial year was less than half the rates of Maori, Pacific and European/Other people. (Table 76 and Figure 63)

Table 76: Taikura Trust users assessed during the 2010/2011 financial year by total response ethnicity and sex

Ethnicity	Female		Male	
	No.	Rate per 100,000	No.	Rate per 100,000
Asian	345	217	654	427
Maori	545	619	727	872
Pacific	633	627	877	904
European/Other*	2,599	641	3,805	970

Source: Ministry of Health; total response ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 63: Taikura Trust users assessed during the 2010/2011 financial year by total response ethnicity and sex



Source: Ministry of Health; total response ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

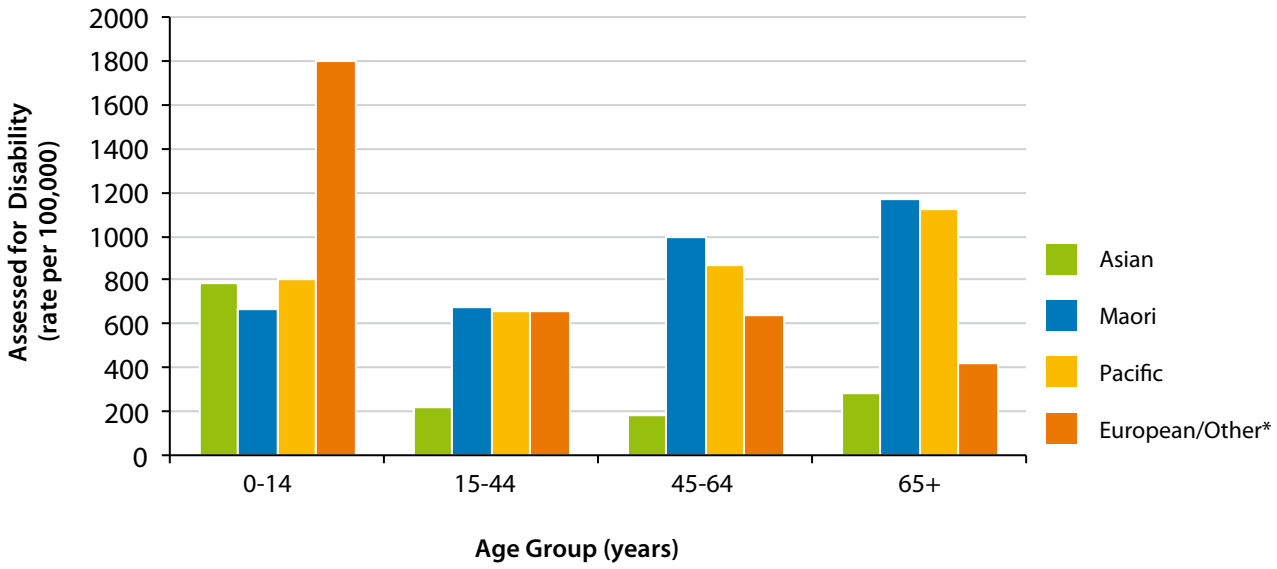
Table 77 and Figure 64 present data regarding the number and rate of Taikura Trust users assessed during the 2010/2011 financial year broken down by total response ethnic group and age group. Among 0 to 14 year olds, Asian people had similar rates of assessment for services as Maori and Pacific children, and much lower rates than European/Other children. Among people aged 15-44 years and 45-64 years, Asian people were assessed for disability services at less than half the rate of the three other ethnic groups examined. Although Taikura Trust is not contracted to look after disabled people beyond 65 years of age, a number of people aged 65 years or over still utilise Taikura Trust services as their primary need for support is based on their disability rather than their age. (F Teina, personal communication, 2012). Among people aged 65 years or over, Asian people had the lowest rate of assessment by Taikura Trust during the 2010/2011 financial year. The proportionally higher rates of service access among children with disabilities compared to other age groups probably reflects the recent work around child disability among culturally and linguistically diverse (CALD) families in Auckland.

Table 77: Taikura Trust users assessed during the 2010/2011 financial year by total response ethnicity and age group

Ethnicity	0-14 years		15-44 years		45-64 years		65 years or over	
	No.	Rate per 100,000	No.	Rate per 100,000	No.	Rate per 100,000	No.	Rate per 100,000
Asian	458	787	374	218	120	184	47	280
Maori	400	670	527	674	276	1000	69	1168
Pacific	517	804	602	658	283	867	108	1125
European/Other*	2315	1805	2154	659	1424	641	511	424

Source: Ministry of Health; total response ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 64: Taikura Trust users assessed during the 2010/2011 financial year by total response ethnicity and age group



Source: Ministry of Health; total response ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

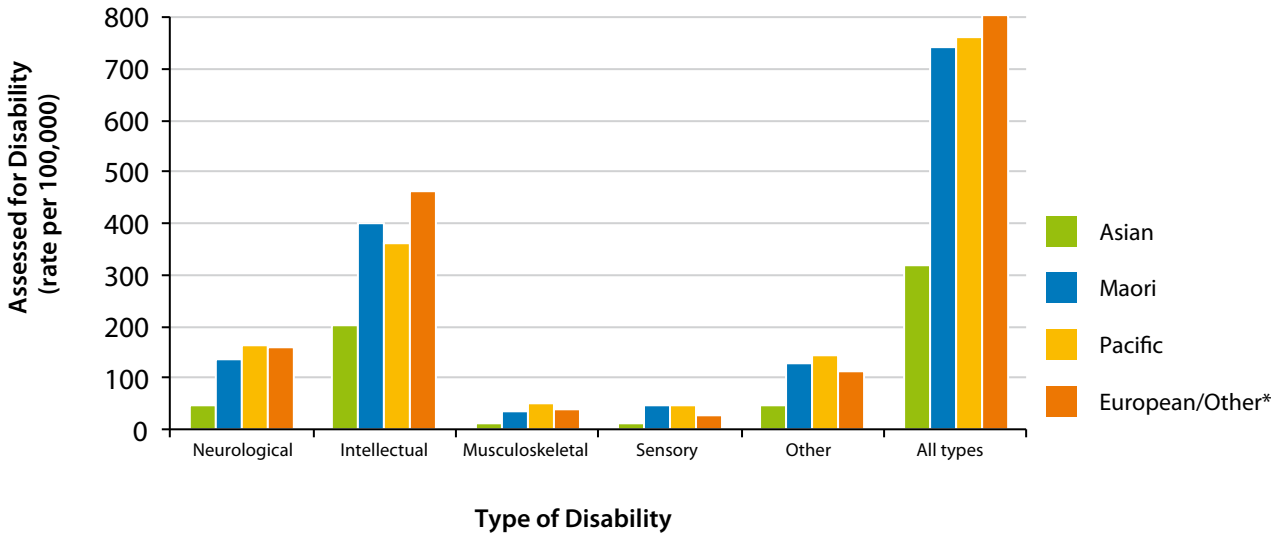
Table 78 and Figure 65 indicate that of the Taikura Trust users assessed during the 2010/2011 financial year, the rate of Asian people assessed for each type of disability as well as across all types was much lower as compared to European/other people

Table 78: Taikura Trust users assessed during the 2010/2011 financial year by total response ethnicity and type of disability

Ethnicity	Neurological		Intellectual		Musculoskeletal		Sensory		Other		All Types	
	No.	Rate per 100,000	No.	Rate per 100,000	No.	Rate per 100,000	No.	Rate per 100,000	No.	Rate per 100,000	No.	Rate per 100,000
Asian	458	787	374	218	120	184	47	280	145	46	999	320
Maori	400	670	527	674	276	1000	69	1168	217	127	1271	742
Pacific	517	804	602	658	283	867	108	1125	281	142	1510	762
European/Other*	2315	1805	2154	659	1424	641	511	424	912	114	6404	803

Source: Ministry of Health; total response ethnicity.
European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Figure 65: Taikura Trust users assessed during the 2010/2011 financial year by total response ethnicity and type of disability



Source: Ministry of Health; total response ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian people

17.3 Summary of Disability

Prevalence of Disabilities among Asian people across New Zealand

Data regarding the prevalence of disabilities among Asian people in Auckland are not currently available. National data from the New Zealand Household Disability Survey conducted in 2006 indicated that, across all age groups, Asian people in New Zealand had the lowest prevalence of reported disability of the ethnic groups examined.

Access to Disability Services in Auckland

Taikura Trust is the organisation that has been funded by the Ministry of Health to provide needs assessment and service coordination (NASC) to disabled people under the age of 65 years in the Auckland region. There were 11,549 active users of Taikura Trust recorded as at 30 June 2011, and the rate of Asian people across Auckland using disability services was less than half the rate of the three other ethnic groups examined.

Of the 11,549 active users of Taikura Trust as at 30 June 2011, more detailed data was available for 10,185 people who were assessed between 1 July 2010 and 30 June 2011. The rate of Asian people (per 100,000 people) assessed for access to Taikura Trust services during that year was much lower as compared to European/Other people when service access was considered according to total response ethnic group and DHB, sex, age group and disability type.

18. Risk and Protective Factors

18.1 Smoking

18.1.1 Current Smokers

Cigarette smoking is a well-recognised risk factor for many health conditions, including cardiovascular disease, respiratory conditions and many cancers, and is a major cause of preventable death in OECD countries.[45]

Data regarding prevalence of smoking among Asian communities in Auckland are not currently available. The most recent New Zealand Tobacco Use Survey was conducted in 2009.[61] Table 79 presents estimates of the prevalence of current smoking and the number of smokers across New Zealand in 2009 by ethnic group and sex.

Table 79: Current smoking among people aged 15-64 years across NEW ZEALAND by total response ethnicity and sex, 2009

Ethnicity	Males		Females		Total	
	Prevalence (95% CI)	Estimated Number	Prevalence (95% CI)	Estimated Number	Prevalence (95% CI)	Estimated Number
Asian	16.2% (11.0-21.4)	30,000	4.4% (1.9-8.5)	7,200	10.7% (7.5-14.0)	37,200
European/Other*	20.6% (18.1-23.1)	204,200	18.9% (17.0-20.8)	207,600	19.7% (18.1-21.3)	411,800

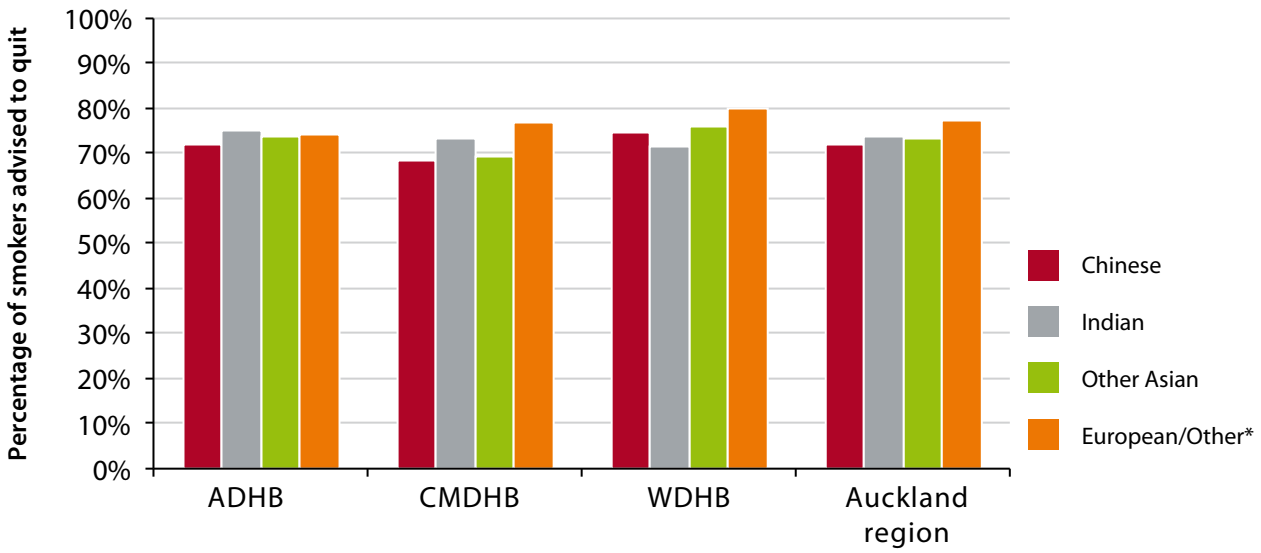
Source: New Zealand Tobacco Survey 2009; total response ethnicity.
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

Across New Zealand, the prevalence of smoking was lower among Asian males and much lower among Asian females as compared to their European/Other counterparts. These prevalence data may be partially explained by potential underreporting of smoking among Asian communities, as well as the large number of Asian international students in Auckland who may have lower rates of smoking than older Asian people. However, the absolute number of Asian smokers in Auckland is likely to rise dramatically as Asian population growth occurs.

18.1.2 Quitting Smoking advice in Auckland hospitals

Figure 66 presents the percentage of smokers across Auckland who were registered as smokers during secondary care and who were advised to quit.

Figure 66: Percentage of smokers registered in Auckland hospitals between 1 July 2010 and 30 June 2011 who were advised to quit smoking



Source: Ministry of Health; standard prioritised ethnicity
*European/Other refers to all European, and non-Maori/Pacific/Asian peoples

The percentage of registered smokers in secondary care who were advised to quit was similar across the ethnic groups and across the three Auckland DHBs.

18.1.3 National Quit Services

Auckland data regarding access to quit services by ethnic group were not available, but national data regarding the use of smoking cessation services by Asian smokers was collected by the Quit group.[62] The Quit group offers a range of smoking-cessation services across New Zealand, including a free-phone advice service called Quitline, a web-based service that provides information about quitting smoking and allows clients to order nicotine replacement products and a texting service (Txt2Quit) that provides automated quit support messages.

Between January 2007 and December 2008, a total of 87,718 smokers registered with quit services across New Zealand including 2,692 Asian smokers. Table 80 indicates that a similar proportion of Asian clients accessed each of the three different quit services compared to clients from all ethnic groups (ie overall clients).

Table 80: Registrations with the Quitline and web services by Asian and Overall Clients, January 2007 – December 2008

Quit services	Asian clients	%	Overall Clients	%
Quitline	1,790	66.5	58,065	66
Web service	822	30.5	27,332	31.2
Txt2Quit	80	3.0	2,330	2.7
Total	2,692	100.0	87,718	100.0

Source: J.Li, New Zealand Asian Smokers: Characteristics and Use of National Quit Services (Full Report). The Quit Group, 2009.
Please note that the Txt2Quit service was only operational between June and December 2008.

Table 81 presents data regarding use among Asian subgroups of the two quit services that were available for the duration of 2007 and 2008. Within each Asian ethnic group, a greater proportion of clients registered with Quitline as compared to the web service. Chinese smokers were more likely to use the web service than any other Asian sub-group.

Table 81: Registrations with the Quitline and the web by Asian ethnic groups, January 2007 –December 2008

Asian ethnic sub-group	Quitline registration %	Web service registration %
Indian	70.3	29.7
Chinese	54.7	45.3
South East Asian	79.3	20.7
Other Asian	74.6	25.4

Source: J.Li, New Zealand Asian Smokers: Characteristics and Use of National Quit Services (Full Report). The Quit Group.2009

18.2 Other Risk and Protective Factors

Auckland-specific data regarding other risk and protective factors among Asian peoples are not currently available. However, the 2002-2003 and 2006-2007 New Zealand Health Surveys explored a range of health indicators, and this section provides a summary of the key findings regarding lifestyle factors for Asian people.

Both surveys employed a three stage, stratified sampling method to randomly recruit participants from households across the country. The 2002-2003 survey only included adults (Chinese 494, South Asian 391 and Other Asian 332). Children aged 0-14 years (Chinese 220, South Asian 316, Other Asian 165, Maori 1,947, Pacific 537, and European 1,710) and adults (Chinese 540, South Asian 565, Other Asian 387, Maori 3,131, Pacific 890, and European 6,719) participated in the more recent survey.

An analysis of trends in Asian data across these two surveys was published in 2010.[16] The following key trends regarding lifestyle factors were noted:

Nutrition:

- The proportion of children who were breast fed was higher among Europeans and South Asians (both 90%) as compared to Chinese (80%) and Other Asians (79%)
- Fewer adults from all three Asian sub-groups consumed the recommended daily serves of fruit and vegetables (Chinese 47%, South Asian 40% and Other Asian 41%) compared to Europeans (57%), and these proportions were essentially unchanged for the Asian sub-groups compared to the 2002-2003 survey.

Physical activity

- All three Asian sub-groups were less likely to have engaged in 15 minutes of vigorous exercise or 30 minutes of moderate activity on five of the previous seven days (Chinese 41%, South Asian 46% and Other Asian 45%) as compared to European people (54%). The proportions of Asians who were physically active did not change across the two surveys.

Tobacco

- Fewer Asian women were current smokers compared to their European counterparts (4% and 15% respectively) but similar proportions were noted among Asian and European men (17% and 15% respectively). The frequency of tobacco smoking among Asian people was similar in both surveys.
- Among adults, the proportion that lived in a house where people smoked was lower for South Asians and similar for Chinese and Other Asian people compared to Europeans. Similar proportions of Asian and European children were exposed to indoor second-hand tobacco smoke at home.

Alcohol

- Asian men and women were less likely to drink (Chinese 64%, South Asians 52%, Other Asians 66%) as compared to European people (89%).
- Asian people were also less likely to binge drink as compared to their European, Maori and Pacific counterparts; among people who drank alcohol in the last year, all three Asian sub-groups were more likely to have 1-2 drinks and less likely to have 10 or more drinks than any other ethnic group.
- The frequency of alcohol consumption was unchanged for South Asian people between the two surveys but increased among Chinese and Other Asian men and women.

Body Size

- Using International Obesity Task Force criteria, approximately 20% of both Asian and European children aged 2-14 years were obese or overweight.
- In the 2006-2007survey, the prevalence of adult obesity according to the ethnic-specific criterion of BMI> 25 was greater among all three Asian subgroups as compared to European men and women.(Chinese 31%, South Asian 55%, Other Asian 33%, European 24%). The prevalence of adult obesity in all three Asian sub-groups increased by at least 10% between the two surveys.

Acculturation

- Longer duration of residence in New Zealand among Asian people was associated with greater likelihood of drinking alcohol, obesity, and being a smoker.

18.3 Summary of Risk and Protective Factors

Smoking

Data regarding the prevalence of smoking among Asian communities in Auckland are not currently available. Across New Zealand, the prevalence of smoking was lower among Asian males and much lower among Asian females as compared to European/Other males and females.

The percentage of registered smokers in secondary care who were advised to quit was similar across the ethnic groups and across the three Auckland DHBs.

National data regarding the use of smoking cessation services by Asian smokers was collected by the Quit group, and indicated that a similar proportion of Asian clients accessed the three smoking cessation services available in 2007 and 2008 as compared to clients of all ethnic groups combined. Among each of the Asian sub-groups examined, Quitline attracted more registrations than the web-based service.

Other Risk and Protective Factors

Auckland-specific data regarding other risk and protective factors among Asian peoples are not currently available. However, an analysis of trends in Asian data across the 2002-2003 and 2006-2007 New Zealand Health Surveys was published in 2010. All three Asian sub-groups were less likely to consume the recommended daily serves of fruit and vegetables and to be physically active and more likely to be obese as compared to European men and women, with little progress in these areas shown between the two surveys. Asian women were less likely but Asian men were as likely as their European counterparts to be current smokers, and alcohol consumption was less common among all three Asian sub-groups as compared to Europeans. Increased duration of residence in New Zealand was associated with increased likelihood of drinking alcohol being obese and being a smoker.

19. Trends across HNAs Examining Asian Health in Auckland

This section examines key trends across this HNA, the 2008 HNA for Asian people in CMDHB[19] and the 2009 HNA for Asian people in WDHB.[20]

The three HNAs deal with data specific to the Auckland region, and include hospitalisation and mortality data from national datasets rather than self-reported data, which can be affected by recall and response bias. The spread of data across a four year period allows for discernment of trends over time and identification of key areas of health need that require urgent attention. Each of the three HNAs analysed data for Chinese, Indian and Other Asian sub-groups, and primarily used census-based estimated resident population counts as the denominator for calculating rates. The 2003 Asian Public Health report has not been included, although it focuses on the Auckland region, because data is presented for the 'Asian' group as a whole and is therefore affected by the problem of averaging data across the Asian ethnic sub-groups.

However, there are limitations attendant in comparing results across the three HNAs. The 2009 WDHB HNA mainly used standard prioritised ethnicity classification, as was employed in the current HNA. However, the 2008 CMDHB HNA categorised ethnicity according to total response. The demographic data included in the WDHB and CMDHB HNAs are based on actual census counts whereas the demographic data presented in the current report is based on estimates. Both the current HNA and the WDHB used non-Maori/non-Pacific/non-Asian people as a comparison group whereas the CMDHB HNA compared Asian data with Europeans. There are also some instances where the indicators, data sources or age ranges chosen across the three HNAs differ. These have been noted where appropriate, and general trends have been commented on where possible.

19.1 Population Demography

- The Chinese, Indian and Other Asian populations together are estimated to have increased in size by around 4% in both CMDHB and WDHB between 2006 and 2010
- Between 2006 and 2010, Chinese, Indian and Other Asian populations in CMDHB and WDHB remain relatively young populations with similar proportions of males and females.

19.2 Health Outcomes

- The life expectancy of Chinese, Indian and Other Asian males and females in CMDHB and WDHB has remained similar[a], with all three sub-groups estimated to have higher life expectancy than Maori, Pacific and European/Other people. Chinese males and females still have the highest life expectancies in both DHBs.
- The specific total mortality rates are not comparable across the three HNAs, as the CMDHB and WDHB data are for people aged 15 years or over, whereas the current HNA has restricted the age range to people aged 15 to 74 years inclusive. In both CMDHB and WDHB, men and women from all three Asian sub-groups still have lower total mortality rates as compared to their European/Other counterparts.
- The current HNA analysed leading causes of potentially avoidable mortality for the Auckland region as a whole. However, the top 5 causes in all three HNAs include: CVD and diabetes among Indians, CVD and lung cancer among Chinese people, and CVD and lung cancer among Other Asians.

19.3 Health Services Utilisation

- PHO enrolment data were not analysed in the CMDHB HNA, and were not broken down by Asian ethnic sub-groups in the WDHB HNA. However, Asians together in WDHB had lower PHO enrolment during 2006/2007 compared with other ethnicities, and this is still apparent from the WDHB data presented in the current HNA, especially among Chinese and Indians.
- The leading causes for potentially avoidable hospitalisations (PAHs) were analysed in the current HNA for the Auckland region as a whole. However, when compared to the CMDHB and WDHB HNAs, leading causes across all three HNAS include CVD and diabetes for Indians and Other Asians, as well as Chinese people where diabetes appears to have become a more important cause of PAH.

19.4 Important Health Issues

19.4.1 CVD

CVD data for the current HNA has been restricted to people aged 35 to 74 years inclusive, whereas the two previous HNAs have used different age ranges. The CMDHB HNA presented both mortality and hospitalisation data for 15-74 year olds and the WDHB HNA alternates between using data for people aged 15-74 years and those aged 15 years or older. Mortality data for the current HNA is also presented for the Auckland region as a whole. The following general trends across the HNAs were noted:

- By comparison to their European or European/Other counterparts, CVD-related (ie IHD/CHD and stroke) mortality rates were similar for Indian men and women in the CMDHB HNA, but are significantly higher for Indian men and higher (non significant difference) for Indian women in the current HNA. Within the Asian sub-groups, the mortality rate for CVD was highest for Indian men and women in both the WDHB HNA and the current HNA. The WDHB HNA did not compare CVD mortality rates among the Asian sub-groups to non-Asian ethnic groups and the CMDHB HNA did not analyse mortality rates for CVD overall.
- The CVD hospitalisation indicators across the three HNAs show, in general, that Indians:
  - have the highest hospitalisation rates for CVD-related admissions of all the Asian ethnic sub-groups
  - much higher rates as compared to European or European/Others
  - are a high-risk group for CVD along with Maori and Pacific peoples.
  - have the highest coronary procedure rates of all the ethnic groups

However, it is not possible to compare the actual rates for the specific CVD hospitalisation indicators used across the three HNAs due to the differences in data presented.

It is also difficult to compare the rates for Other Asian men and women across the three HNAs due to the small numbers (and wide confidence intervals) in the CMDHB HNA and the lack of comparison to non-Asian ethnic groups in the WDHB HNA.

a. The CMDHB HNA examined life expectancy using 2004-2006 data, the WDHB HNA used data from 2002-2005, and the current HNA used 2010 data.

19.4.2 Diabetes

- The WDHB HNA did not disaggregate diabetes prevalence data for the Asian ethnic sub-groups. The CMDHB and current HNAs indicate that among adults:
  - Indians have the second highest prevalence of diabetes (after Pacific peoples) of all the ethnic groups examined. However, the specific prevalence percentages cannot be compared as the CMDHB HNA considered people aged 15 years or older whereas the current HNA restricted the age range to people aged 15 to 74 years.
  - The prevalence of diabetes among Other Asian men and women and their European counterparts was similar in CMDHB in 2008, but the prevalence of diabetes in the Other Asian community has risen such that it is now higher as compared to European/Other people in all three DHBs, particularly among Other Asian men and women aged 35 years or older.
- Diabetes mortality was not analysed in the WDHB HNA. Both the CMDHB and current HNA indicate that Indians and Other Asians have higher mortality rates from diabetes than European or European/Other people (significant difference in the current HNA)
- Diabetes hospitalisation data were not presented in the WDHB HNA. Both the CMDHB and the current HNA presented data for 15 – 74 year olds and comparison of these data indicate that:
  - Indian men and women have a much higher hospitalisation rate than Europeans and European/Others, with little change in rates between the two reports.
  - Other Asian women have similar rates but the rates may be increasing for Other Asian men (from around 200 per 100,000 to around 300 per 100,000). However, the difference is not significant.

19.4.3 Cancer

Indicators for cancer mortality and registrations were not examined in the CMDHB HNA, and were not considered separately for Asian ethnic sub-groups in the WDHB HNA except for breast cancer registration data which was presented for a non-comparable age-group to that used in the current HNA. However breast and cervical screening data across the three HNAs indicate that:

- Breast screening rates were slightly lower among Chinese women in all three HNAs as compared to European/Others and Europeans. However, Indian and Other Asian women had slightly lower screening rates in the WDHB and CMDHB respectively compared to their European/Other and European counterparts, but rates were similar when compared in the current HNA which may indicate an improvement in uptake of breast screening among these sub-groups.
- Cervical screening data were not presented in the CMDHB HNA and were not disaggregated by Asian ethnic sub-group in the WDHB HNA. However, the WDHB HNA indicated that rates among Asian women were almost half those of non-Maori/non-Pacific/non-Asian women aged 20 to 69 years and the current HNA suggests that uptake of cervical screening among Asian women has not improved.

19.4.4 Child Health

- Both the WDHB and CMDHB HNAs noted that a higher percentage of low birth weight babies are born among Indians (10-11%) as compared to European babies (5-6%), and these proportions are similar in the current HNA for Indian babies born in these two DHBs.
- Immunisation data were not disaggregated by Asian sub-group in the WDHB HNA. However, all three HNAs show that immunisation rates are similar among Asian children as compared to Europeans or European/Others.
- The CMDHB HNA indicated that Chinese and Indian children aged 0-14 years had similar or slightly higher rates of hospitalisations for dental conditions, and Other Asian children had much higher rates, as compared to their European counterparts. These trends are still evident in the current HNA for the Auckland region as a whole.
- Infant mortality rates were higher among some of the Asian ethnic sub-groups in each of the three HNAs as compared to European/Other or European infants. However, the numbers of deaths involved are small, and the confidence intervals (presented in both the WDHB and current HNAs) indicate that the differences were not significant.
- Small numbers of deaths among children aged 0 to 14 years in the WDHB and CMDHB HNAs precludes a reliable comparison of trends with data presented in the current HNA.

19.4.5 Women's Health

- New Zealand-wide and CMDHB data from 2004-2006 (included in the CMDHB HNA) and Auckland-wide data from 2008-2010 (presented in the current HNA) indicated that all three Asian sub-groups had lower delivery rates than European or European/Other teenagers. The 2004-2006 New Zealand and CMDHB data also indicated that Indian teenagers had higher delivery rates than their Other Asian counterparts. Data from 2008 -2010 for the Auckland region showed that Other Asian teenagers across Auckland have a higher rate than Indian teenagers. Although the difference in Indian and Other Asian rates in the current HNA are not significant, this may indicate a rising rate of teenage deliveries among Other Asian teenagers.
- Data from the CMDHB and WDHB HNAs regarding first trimester terminations of pregnancy in the public sector indicate that Indian women more than 20 years of age generally have higher rates than their Chinese, Other Asian women and European counterparts. Data in the current HNA was not available broken down by age group or DHB, but Indian women across Auckland of all ages still have higher rates than Chinese, Other Asian or European/Other women.
- Data regarding first trimester terminations of pregnancy in the private sector were not presented for the WDHB HNA. CMDHB data for 2004-2006 indicated that Chinese women had the highest unadjusted rates of private terminations (around 7 per 1,000) of all the ethnic groups examined, followed by Indian women (around 6 per 1,000). Data from the current HNA for 2010 indicates that Indian women now have the highest unadjusted rates in CMDHB (7.1 per 1,000), and the Chinese and Indian unadjusted rates across Auckland are very similar (7.1 and 7.0 per 1,000 respectively).

19.4.6 Surgical Procedures

- Rates for surgical procedures were presented for people aged 15 years or older in the CMDHB and current HNAs and for people aged 15 to 74 years in the WDHB HNA. The current HNA presented surgical indicator data for the Auckland region as a whole. The following general trends were noted:
- The rates of total hip joint replacements were significantly lower among the Asian ethnic sub-groups in all three HNAS as compared to Europeans or European/Others, and do not appear to be increasing.
- The rates of total knee joint replacements were significantly higher in all three HNAs among Indian people compared to their European or European/Other counterparts. The rates noted in the CMDHB HNA for all three Asian sub-groups remained similar in the current HNA.
- All three HNAs showed that the rate of cataract extractions among Indians was higher than among Chinese or Other Asian people and was significantly higher when compared to Europeans or European/Others. Comparison of rates in the CMDHB and current HNAs suggest that the rate of cataract extractions among Indians has remained static.
- The small numbers of cholecystectomy and prostatectomy procedures performed in CMDHB and WDHB during the periods examined preclude a reliable comparison with data from the current HNA.

19.4.7 Mental Health

- Mental health was not examined in the CMDHB HNA. The WDHB HNA did not disaggregate mental health data by Asian ethnic sub-groups. However, the following conclusions can be drawn:
- Suicide among Asian people aged 15 years or older is still occurring at a much lower rate than among non-Maori/non-Pacific/non-Asian people.
- The WDHB HNA reported New Zealand Health Survey data regarding self-reported data for chronic mental health conditions. This indicator is not directly comparable to the indicator regarding the rate of any clinically significant mental health condition among adults accessing DHB mental health services included in the current HNA. However, both HNAs show that mental health conditions are recorded at much lower rates among Auckland Asian communities than among non-Maori/non-Pacific/non-Asian people.

19.5 Summary of Key Trends across HNAs examining Asian Health in Auckland

Chinese, Indian and Other Asian populations:

- are relatively young, and together have increased by around 4% between 2006 and 2010
- still have higher life expectancy and lower all-cause mortality rates than other ethnic groups
- have lower suicide rates and lower recorded rates of mental health conditions than their European/other counterparts

Key trends for Chinese:

- Continuing low PHO enrolment rate in WDHB
- Diabetes is becoming a more important cause of potentially avoidable hospitalisations
- Continuing low cervical screening rates, and slightly lower breast screening rates compared to European/Other women.

Key trends for Indians:

- Increasing mortality rates from CVD among Indian men and possibly Indian women compared to European/Others
- Continuing high hospitalisation rate for CVD as compared to European/Others and highest coronary procedure rates of all the ethnic groups examined
- Continuing to have the second highest prevalence of diabetes after Pacific people and higher mortality rates from diabetes as compared to European/Others
- Continuing low PHO enrolment rate in WDHB
- Continuing low cervical screening rates but possible improvement in uptake of breast screening compared to European/Other women
- Ongoing high proportion of low birth weight babies
- Ongoing higher public first trimester termination of pregnancy rates than other Asian sub-groups or European/other women, and increase in private terminations
- Continuing high rates of total knee joint replacements and cataract extractions compared to European/Others.

Key trends for Other Asians:

- The prevalence of diabetes is increasing, particularly among men and women aged 35 years or older, and the mortality rate from diabetes continues to be higher compared to European/ Other people
- CVD continues to be a leading cause of potentially avoidable hospitalisations
- Continuing low cervical screening rates but possible improvement in uptake of breast screening compared to European/Other women
- Continuing significantly higher rate of child hospitalisations for dental conditions compared to their European/Other counterparts
- Possible increase in teenage delivery rate.

20. Summary of Key Findings from the Quantitative Data

20.1 Asian People – Chinese, Indians and Other Asians

Population Demography

Around 22% of the total Auckland population in 2010 were estimated to be Asian, and the Auckland Asian population is projected to rise more than 60% by 2026. In 2010, around 310,000 Asian people were residing in the Auckland region, comprising 127,000 Chinese, 100,000 Indians, and 84,000 Other Asian people. Asians represent the second largest ethnic group in ADHB, WDHB and across the Auckland region, and the third largest group in CMDHB after European/Other and Pacific peoples.

Skilled Migrants and International Students

Among skilled migrants, there has been a decline over recent years in the number of Chinese migrants and an increase in Indian, South Korean, Filipino and Fijian migrants. China, India and South Korea are the three most common sources countries for international students in Auckland.

Health Issues where Asian sub-group data was unavailable

For certain indicators and data sources, data was available only for the overall Auckland Asian population and not for Chinese, Indian and Other Asian people separately.

- Less than 1% of Asian people over 65 years are cared for in rest homes and private hospitals; this proportion is lower than among other compared ethnic groups. In 2011, interRAI data indicates that fewer Asian people (46%) lived at home alone or with a spouse as compared to European/Other older people (around 80%). Instead, a greater proportion of older Asian people live with children and a similar proportion receive home care services compared to their European/Other counterparts.
- Substantiated child abuse was recorded by Child Youth and Family at lower rates among Asian families as compared to European/Other families during the 2007/2008, 2008/2009, and 2009/2010 financial years. Nevertheless, care and protection orders were under-utilised to protect Asian children against child abuse and neglect. Asian women and children in New Zealand also comprise the lowest proportion of those accessing Women's Refuge services of all the ethnic groups examined during the 2008/2009, 2009/2010 and 2010/2011 financial years.
- National data from the New Zealand Household Disability Survey conducted in 2006 indicated that, across all age groups, Asian people in New Zealand had the lowest prevalence of reported disability of the ethnic groups examined. In 2011, the rate of Asian people across Auckland who accessed disability services was less than half the rate among European/Other people, irrespective of whether data were considered according to DHB, sex, age group or disability type.

20.2 Chinese People

The Chinese population in Auckland is relatively young, with large numbers of people aged 20 to 29 years. The majority of Chinese people have no religious affiliation, around 20% are Christian and over 10% are Buddhist. The Auckland suburbs with the greatest density of Chinese people residing in them are Auckland Central, Epsom, New Lynn and Dannemora.

High Priority Health Issues and Unmet Needs

- In 2010, Chinese PHO enrolment rates were low across Auckland (73% for ADHB, 63% for CMDHB, 45% for WDHB and 63% across the Auckland region)
- Higher prevalence of diabetes among Chinese men aged 75 years or older and Chinese women aged 55 years or over and a significantly higher proportion of live deliveries complicated with diabetes in pregnancy among women aged 15-44 years compared to European/Other people
- Significantly higher rates of cataract extractions compared to European/Other people
- Cervical cancer screening rates less than half those of European/Other women
- Lowest proportion of five year olds with caries-free teeth among all the ethnic groups examined
- Highest first trimester termination of pregnancy rates in the private sector of all the ethnic groups examined among Chinese women aged 15-44 years (not age-standardised) and teenage women (10-19 years).

Health Indicators where similar or better outcomes were noted compared to European/Others

- Highest life expectancy of any of the ethnic groups examined
- Lowest adult all-cause mortality, potentially avoidable mortality, potentially avoidable hospitalisation and Care Plus enrolment rates of all the ethnic groups examined
- Lower recorded rates of inpatient falls and pressure sores
- Lower adult CVD mortality rates among men and women, and lower CVD hospitalisation rates among men and women (except for stroke hospitalisations among women where similar rates were noted for Chinese and European/Other women)
- No significant differences in diabetes mortality rates, hospitalisations for diabetic neuropathy, or hospitalisations for renal complications of diabetes, and lower hospitalisation rates for diabetes overall
- Lower overall mortality from cancer, cancer registrations and similar rates of breast cancer screening
- Lower rates of family violence-related assaults, recorded elder abuse, and access to family-violence support services
- Lower rates of mental health diagnoses and access to mental health services compared to European/Others

- Lower rates of infant mortality, child mortality, potentially avoidable child hospitalisations, and similar rates of immunisation coverage and low birth weight babies
- Lower rates for total fertility, teenage deliveries, ectopic pregnancy, and hysterectomies; lower proportion of live deliveries among women aged 15-44 years requiring assisted deliveries and publically-funded caesarean sections or complicated by pre-eclampsia and no significant difference in hospitalisation rates for sexually transmitted diseases
- Lower rates of the following surgical procedures: total hip joint replacements, total knee joint replacements, cholecystectomies, and prostatectomies
- Similar percentage of smokers registered in Auckland hospitals who were advised to quit smoking.

20.3 Indian People

Indians in Auckland are a young population, with large numbers aged between 25 and 34 years. More than 50% are Hindu, and other common religions include Islam, Christianity, and Sikhism. The Auckland suburbs with the greatest Indian population density were Auckland Central, Sandringham, Mount Roskill, New Lynn, Otahuhu, Mangere, Papatoetoe, Manukau Central and Dannemora.

High Priority Health Issues and Unmet Needs

- In 2010, Indian PHO enrolment rates in WDHB were only 52%
- Higher potentially avoidable hospitalisation rates among Indian men as compared to European/Other men (significant) and slightly higher rates (generally significant) among women
- Highest utilisation of chronic care management (Care Plus) of all the ethnic groups examined
- Compared to European/Others, higher mortality and hospitalisation rates from CVD overall/coronary heart disease/ stroke, higher rate of coronary procedures, higher hospitalisation rates for congestive heart failure, and greater dispensing of pharmacotherapy for CVD
- Overall adult diabetes prevalence of 11-12%, with higher prevalence of diabetes compared to all other ethnic groups except Pacific people from age 35 years onwards among both men and women. Significantly higher diabetes mortality rates, rates of overall diabetes hospitalisations, renal complications of diabetes and diabetic neuropathy among both Indian men and women and significantly higher proportion of live deliveries complicated by diabetes in pregnancy among women aged 15-44 years as compared to their European/Other counterparts
- Highest rates of cataract extractions of all the ethnic groups examined
- Cervical cancer screening rates less than half those of European/Other women, and the lowest rates of cervical screening among the Asian sub-groups examined
- Highest recorded rates of family violence-related physical assaults reported to Police, associated convictions, and access to Victim Support services of all the ethnic groups examined
- Higher proportion of low birth weight babies
- Lower proportion of five year olds with caries-free teeth and slightly higher rate of child hospitalisations with dental conditions compared to European/Other counterparts
- Higher child hospitalisation rates for asthma compared to European/Other children
- Higher first trimester termination of pregnancy rates in the private sector among Indian women aged 15-44 years (not age-standardised) and Indian teenagers (10-19 years) compared to their European/Other counterparts.
- Higher rates of hysterectomies and total knee joint replacements as compared to European/Other women.

Health Indicators where similar or better outcomes were noted compared to European/Others

- Higher life expectancy
- Lower adult all-cause and similar potentially avoidable mortality rates
- Lower recorded rate of inpatient falls and pressure sores but highest rates among the Asian ethnic groups examined
- Greater proportion received annual diabetes reviews and had an adequate diabetes control in CMDHB and ADHB. (Get Checked Diabetes data was not available for Indians in WDHB).
- Lower overall mortality from cancer, cancer registrations and similar rates of breast cancer screening
- Lower recorded rates of elder abuse
- Lower rates of mental health diagnoses and access to mental health services compared to European/Others
- Similar rates of infant mortality, child mortality, potentially avoidable child hospitalisations, and immunisation coverage
- Lower rates of total fertility and teenage deliveries; lower proportion of live deliveries among women aged 15-44 years requiring publically-funded caesarean sections; similar rates of ectopic pregnancy, similar proportion of live deliveries among women aged 15-44 years requiring assisted delivery or complicated by pre-eclampsia, and similar hospitalisation rates for sexually transmitted diseases
- Lower rates of total hip joint replacements and cholecystectomies, and similar rates of prostatectomies
- Similar percentage of smokers registered in Auckland hospitals who were advised to quit smoking.

20.4 Other Asian People

The Other Asian group is comprised of a number of diverse populations, the largest of which are Koreans, Sri Lankans, Filipinos and Japanese. These various communities have widely varied religious affiliations and, together, Other Asians have a relatively young population. Suburbs with the greatest density of Other Asian people residing in them were Browns Bay, Wairau Valley, Auckland Central, and Dannemora.

High Priority Health Issues and Unmet Needs

- In 2010, Other Asian PHO enrolment rates in WDHB were only 73%
- Higher utilisation of chronic care management (Care Plus) as compared to European/Others
- Higher rates of overall CVD hospitalisations (not significant) and stroke hospitalisations (significant among men)
- Higher prevalence of diabetes after 35 years of age among both men and women and a significantly higher proportion of live deliveries complicated by diabetes in pregnancy compared to European/Other counterparts. Higher diabetes mortality rates (significant) and overall diabetes hospitalisation rates (not significant) were also noted
- Significantly higher rates of cataract extractions compared to European/Other people
- Cervical cancer screening rates less than half those of European/Other women
- Lower proportion of five year olds with caries-free teeth and higher child hospitalisation rates for dental conditions compared to European/Other children
- Higher child hospitalisation rates for asthma compared to European/Other children
- Higher first trimester termination of pregnancy rates in the private sector among Other Asian women aged 15-44 years (not age-standardised) and Other Asian teenagers (10-19 years) compared to their European/Other counterparts.

Health Indicators where similar or better outcomes were noted compared to European/Others

- Higher life expectancy
- Slightly lower potentially avoidable hospitalisation rates, lower adult all-cause mortality rates and similar potentially avoidable mortality rates
- Lower recorded rate of inpatient falls and pressure sores
- Similar CVD mortality rates, hospitalisation rates from coronary heart disease, coronary procedure rates, and congestive heart failure rates and lower levels of CVD medication dispensing
- No significant differences in hospitalisation rates for renal complications of diabetes or diabetic neuropathy
- Lower overall mortality from cancer, cancer registrations and similar rates of breast cancer screening
- Lower rates of family violence-related assaults, recorded elder abuse, and access to family-violence support services
- Lower rates of mental health diagnoses and access to mental health services compared to European/Others
- Similar rates of infant mortality, child mortality, potentially avoidable child hospitalisations, and immunisation coverage
- Lower rates of total fertility and teenage deliveries; lower proportion of live deliveries among women aged 15-44 years requiring assisted deliveries, publically-funded caesarean sections or complicated by pre-eclampsia; lower hospitalisation rates for sexually transmitted diseases and similar rates of ectopic pregnancy
- Lower rates of surgical procedures such as total hip joint replacements, total knee joint replacements, and prostatectomies and similar rates of cholyecystectomies
- Similar percentage of smokers registered in Auckland hospitals who were advised to quit smoking.

21. Health Service Provider Interviews

Twelve interviews with health service providers (HSP) from across Auckland were conducted to further understand the needs of Asian communities here. The objectives and methodology are presented in Section 3.

Five broad themes emerged from the interviews:

- Key issues around the health needs of Asian communities in Auckland
- Key cultural differences
- Barriers to accessing health care
- Facilitators to accessing health care
- Unmet needs.

Quotes are interspersed within the summary, and are examples of responses expressed by interviewees but do not necessarily represent the opinions of all the health service providers interviewed.

21.1 Key Issues Concerning the Health Needs of Asian Communities in Auckland

Preventive Behaviour

- Several health service providers observed that preventive behaviour was generally poor among Asian communities in Auckland.
- Physical exercise and healthy eating were not generally a high priority for most Asian people in Auckland.

> *"In our culture, making time out to seek preventive behaviours is really hard. When they have a disease, that's when they'll really want to learn and make a change, and even then, they're really good with taking medications, but not necessarily changing the way that they do things in their life in terms of eating and exercise."*

- Culturally appropriate health promotion advice regarding improving levels of physical activity, dietary modifications, smoking cessation and other preventive strategies are generally well received by Asian people when delivered in a community setting.

Chronic Diseases

- Several health service providers commented that there are increasing volumes of younger South Asian patients developing CVD and diabetes in Auckland
- One health service provider also noted that awareness of cardiovascular issues is increasing among Chinese community in South Auckland, with greater numbers of Chinese patients attending chest pain clinic. However, many of these Chinese patients had non-cardiac-related pain.
- Many of the younger Asian patients diagnosed with CVD or diabetes have not had significant health issues before.
- Many Asian patients are very anxious about their future once they are diagnosed with CVD or diabetes, and are generally quite motivated to make lifestyle modifications. Cardiac rehabilitation is generally well received among Asian patients.
- Diabetic services in Auckland often struggle to connect culturally with Other Asian diabetic patients.
- There is a need for regionally consistent and readily accessible written material regarding CVD and diabetes management that is culturally appropriate and translated. It is also important to continue health promotion in Asian communities around being smoke-free, maintaining a healthy diet, having adequate exercise and other preventive behaviours.
- One health service provider noted that Indian people from India generally had less severe presentations of diabetes than Fijian Indian people. Indian people from India were also generally more knowledgeable about chronic conditions. This was likely to be due to the limited nature of diabetic specialist services for these conditions in Fiji.

Mental Health

- The concept of mental health issues is not well developed in many Asian countries, and consequently mental health conditions are associated with considerable stigma.

> *" You know in our culture, mental health is not seen as a health thing. Everything is very physical."*

- Mental health issues often occur in conjunction with other issues such as social isolation, family violence, and disability. The following mental health issues were most commonly mentioned by interviewees:
  - Depression, particularly among women who were frequently experienced social isolation
  - Post-traumatic stress disorder among Vietnamese and Cambodian people or other refugees who had experienced war, physical abuse or other traumatic events in their home countries
  - Pervasive developmental disorders (which include autistic spectrum disorders) and ADHD in Asian children
- There is a lack of awareness among many Asian people about the mainstream and Asian-targeted mental health services that are available in Auckland. Services include:
  - Mental health support services in WDHB, ADHB and CMDHB which liaise between Asian patients and mainstream DHB mental health services
  - A private service for Chinese people that can triage and then offer a range of mental health services
  - Chinese Lifeline which offers telephone and face to face counselling services.

> *" Many Asian people are too ashamed to come forward to Mental Health Services. In my day to day clinical experience, I can see half of my clients belonging to this group but there is another half of my clients who are desperate to come through the Mental Health Services, except that they don't know the resources; they don't know how to come here."*

- Asian families will generally seek help for mental health issues when they reach a crisis point or if a child is involved.

> *"The family members will call the Police or Ambulance to take a third person for treatment, especially if this person is a child. Irrespective of how insulting or how shameful, they will take the child to see Mental Health Services, because there's a crisis, because culturally children are supposed to be the pearl of the family and they will do everything for the child."*

- Health promotion information delivered through Asian community media and via health professionals has been somewhat successful in raising awareness of mental health issues and services that are available in Auckland for Asian people. Such information has to be 'packaged' neutrally, given the stigma associated with mental health issues in Asian cultures, so that Asian people are not deterred.

Health of Older People

- The idea of placing elderly people into residential or private hospital care is unpopular among Asian communities, and is frequently associated with considerable guilt and social judgement.

> *"Sometimes they feel if they're placing mum or dad into a rest home, the rest of the family members would say 'Oh you're not looking after them properly, you're not fulfilling your responsibility as the eldest son or whatever it is.' That's the guilt."*

> *"Many older people refuse to go to a rest-home, because they think that rest-homes are where people go to die."*

- In situations where care of the elderly is maintained in the home, the majority of the burden often falls upon female relatives.
- There are some culturally appropriate services for Asian older people:
  - Several residential care options are currently available in Auckland, where Chinese, Indian, or Sri Lankan food and TV channels are available, along with staff who speak common Asian languages.
  - Shanti Niwas is a charitable organisation in Auckland that provides community-based support services for socially isolated South Asian elderly and also assists Asian families in accessing home-based care for the elderly when the need arises.
- Two health service providers noted that verbal abuse and neglect of Asian elderly patients were more likely to occur given the reluctance to access residential care. Financial abuse of elderly family members also occurred, particularly where government housing or other allowances were paid into the bank account of younger family members.
- One health service provider noted that elderly Asian people often migrated to New Zealand to live with family. If the younger family members decided to move to Australia, which has stricter immigration policies for elderly Asian people, then these older people, who in some instances could not speak English, were sometimes left in New Zealand without social support.

Disability

- The disability support system is immensely complex in New Zealand, and Asian families (particularly those who have recently immigrated) have little knowledge of what disability services are available and how to access those services. This often leads to delayed access or lack of service access altogether.

> *"Disability support services in New Zealand are quite difficult to navigate and mainstream families struggle... Asian immigrant families are just completely lost!"*

> *"It causes a huge amount of stress for parents because they don't understand the system and they don't know if they have got all the help that they should have. They don't know if they are using the system properly; they are worried because of the 'lost' feeling; there's a huge amount of stress attached to not knowing if they've done enough."*

- Disability is very stigmatised among Asian communities, and contributes to considerable stress, social isolation and mental health issues among affected families.

> *"There are almost always mental health issues and almost always the families are isolated from their own communities because of the stigma attached to disability. So there is the isolation and stress of immigration on top of the isolation and stress coming from disability...it's just a nightmare for these families."*

- Many Asian parents are reluctant for services to be provided in a child-care setting because they are concerned that their child will be labelled as 'disabled' by other families, and consequently ostracised.
- Asian families are generally reluctant to utilise respite services because many do not realise that this is a normal practice in New Zealand, and because of the lack of culturally appropriate respite services in Auckland.
- Transition to school for disabled Asian children can be very challenging, as service provision switches over from Ministry of Health-funded providers to Ministry of Education-funded services. Many Asian families lose track of which services are being provided.
- DHB CALD Child Disability Service cultural case workers have been very successful in providing cultural support to Asian families affected by disability, assisting them to access appropriate services, and connecting them to other Asian families in similar circumstances.

Sexual Health

- Many Asian youth feel caught between two cultures and frequently keep relationships secret from their parents.
- If family members are aware of sexual health issues, then they will often accompany Asian youth to medical appointments.
- Two health service providers noted that contraception was generally well accepted among Asian communities, but termination of pregnancy is becoming increasingly prevalent among Asian students.
- Asian people generally prefer that sexual health issues are dealt with by a health professional of the same gender.

Family Violence

- Family violence is under-reported among Asian families in New Zealand as the issue is associated with considerable stigma among these communities and is considered to be an issue that should be addressed within the family, without involving outsiders.

> *"Sometimes in Asian cultures, saving face in the eyes of the community is more important than safety. Community standing or status is very important. Even if the violence is life-threatening, it is very hard to raise the issue and to get support because it is very embarrassing."*

- One interviewee observed that extreme child abuse was not a common issue among Asian families, although corporal punishment was often seen as a normal and acceptable method of discipline.
- There is often considerable pressure from family members and also community and religious leaders for women to remain in an abusive relationship. Often, the woman is blamed for not being 'good enough' and is advised to modify her behaviour in various ways to prevent further violence.
- Settlement stress is a major trigger for family violence.

> *"Settlement stress is a big factor, because of difficulty finding employment,. There is a lot of struggle to find a job, financial worries and kids struggling at school. So there is increased pressure and most incidents happen in the first three to five years after arriving in New Zealand."*

- Seeking assistance:
  - Many women are concerned that if they disclose family violence, then the community standing and employment prospects of their husband will be adversely affected.
  - Many Asian women are also concerned about retribution from their husbands and fearful of financial independence, especially if children are involved.
  - One interviewee observed that the best way to encourage women to disclose family violence and leave an abusive relationship was to ask about it in a non-threatening and non-judgemental way and provide information regarding options for assistance rather than pressuring women to leave.
  - In many Asian countries, Police and other support agencies refuse to become involved in family violence incidents, so many Asian women in New Zealand are reluctant to contact Police or other agencies here, even in the event of serious violence.

- Many women also do not seek medical attention for injuries sustained during family violence events.

- Asian women who have sought assistance from Police or other family violence support agencies are often very surprised that their complaints are taken seriously and that they are treated in a dignified manner.

- One interviewee noted that the safety order system that allowed Police to issue an order restricting the perpetrator from returning back to the family home for a minimum period of time increased the number of family violence events that were recorded. These safety orders can be issued even if the claim of violence comes from neighbours or other sources outside the family.

- The Asian workforce in the area of family violence was quite restricted so cultural competency training for mainstream family violence support agencies was essential, because if Asian women built up enough courage to access assistance but were not treated appropriately they may never access services again.

- One health service provider noted that early intervention, through raising awareness of the issue and establishing adequate social supports for Asian migrant families, was a crucial component of family violence prevention. At present, there was a dearth of such interventions in Auckland.

Immigration and Settlement Stress

- Almost all of the health service providers noted that the process of settling in New Zealand was associated with considerable stress for Asian migrants, and could be a precipitant for a range of issues including mental health concerns, family violence and exacerbation of existing conditions.

> *"We have quite a lot of things, cultural shocks that we have to accommodate, and also we need to learn a new culture. Without having someone who is already familiar with the system to come and help, it will be very difficult for people - new migrants and refugees to settle in a new country."*

- Isolation and lack of social support is a significant issue for many Asian migrants, particularly if a member of the family is affected by a condition that is associated with stigma in their community. Some Asian women and elderly family members spend long periods of time at home without outside contact due to transport difficulties and lack of an established social circle.

> *"On the psychological side, probably depression, especially in the female patients, is a lot higher among Asian migrants because they do feel isolated - separated from their families, not having that network and the support that they may have in their home countries."*

- One interviewee noted that many Asian children and youth feel caught between two cultures, and this can lead to considerable stress especially around the issue of boyfriends/girlfriends.

Other Issues

- Smoking and drug/use:

  - Several health service providers observed that smoking is relatively prevalent among Asian people in Auckland, particularly among Chinese communities. One health service provider commented that Asian people seem to be relatively responsive to smoking cessation initiatives, particularly after experiencing major health issues such as a cardiovascular event.

  - Two health service providers noted that drug abuse did not seem to be a major issue among Asian communities in Auckland, but alcoholism was more prevalent.

- Infectious diseases:

  - One health service provider noted that rates of hepatitis B were high among Asian populations, with vertical transmission to babies occurring in some instances

  - High rates of hepatitis B may account for the higher rates of hepatoma and liver cancer anecdotally noted to be occurring among Asian communities in Auckland as compared to European New Zealanders.

21.2 Key Cultural Differences

Hierarchical Culture

Asian cultures tend to be hierarchical both in terms of the family structure and in relation to one's position within society.

- In Asian families, older family members are generally treated with great respect.

> *"Well obviously in Asian cultures, ...it's very hierarchical and often times you get the history from the older member of the family – be it mum, dad, elder sister, elder brother or older people."*

- Health professionals, particularly doctors, are considered to have a very high social status in Asian cultures. One interviewee noted that Asian patients may withhold relevant medical information or treatment preferences if they are concerned that this disclosure of this information will be seen as disregarding the advice of the health professional.

> *"So that fear of offending, fear of not being respectful to the authority sometimes can create miscommunication and also distress to the client, but they just don't do it (disclose the information)."*

- Health professionals need to establish credibility with Asian patients before Asian patients will trust them. Once this trust is established, then Asian patients are generally quite loyal and compliant with medical advice.

> *"So you just say I work in a specialist team. I've done my thesis in this and so on. So they like credibility."*

> *"Overall, Asian patients are quite loyal to their treatment provider in the sense that, once they trust you, they'll believe in you and they will do as they are told. That takes a little bit of time. Initially they're very untrustworthy! But then you gain that trust."*

- One health service provider noted that the high regard in which health professionals are held in Asian cultures frequently led to patients giving gifts to health service providers.

Collective Cultures

- Many health service providers felt that Asian cultures tend to be more collectivistic and family-oriented than Western cultures, which they felt were more individualistic. This leads to various issues that affect interactions with health professionals.

- It is common practice in Asian cultures to try and solve problems within the family, rather than seeking outside help. This, together with the stigma associated with particular issues such as disability or mental health, may mean that Asian patients do not disclose certain health concerns or needs.

- Asian patients are frequently accompanied by family members during medical appointments. These accompanying family members may speak on behalf of the patient. Most of the health service providers emphasised the importance of acknowledging each person in attendance and allowing everyone who wishes to speak the chance to do so.

- Decisions around medical care may not necessarily be made by the patient, but rather may be made by other family members, usually husbands or senior family members. However, one health service provider noted that Asian people born in New Zealand or those who have been in New Zealand for some time may choose to make decisions for themselves. It is important for health professionals who are dealing with Asian patients to determine who makes decisions for that patient around medical care.

- In many Asian cultures, it is common place to communicate unfavourable news or diagnoses to the patient's family rather than to the patient themselves. This can create a difficult dynamic during medical interactions in New Zealand where 'bad' news is communicated directly with the patient.

> *"So the patient's more than who is sitting in the chair sometimes, it's where they've been; where they've come from; who they are now; who they were before and who's at home."*

Religion

Religion is important in Asian cultures.

- Many Asian people will have specific days or periods when religious practices are observed. For example, Muslim people fast during the month of Ramadan and some Indian people who are not normally vegetarian will eat strictly vegetarian food on specific days or periods during the year.

- In some religions, particular days or periods during the year are considered inauspicious or alternatively very auspicious, and may affect whether patients seek medical care during those times.

- Fasting during the month of Ramadan creates difficulties around diabetes management among Muslim people. Some general practitioners are unaware that fasting can still be undertaken as long as the dosage of insulin or oral diabetic medications is adjusted, or may be uncomfortable with adjusting the medications, and instead instruct patients not to observe the fast.

> *"A lot of people don't have cultural or religious beliefs, so it's really hard for people to understand that people do things in a certain way."*

Attitudes to health issues and health care

- Certain health issues, for example related to mental health, disability, family violence, or infectious diseases like HIV or hepatitis, are associated with considerable stigma and also may not be well understood among Asian families.

> *"So what is considered a mental health issue in one culture might not necessarily be so in other cultures, and so the difficulty is that a lot of time the patient may not have the buy-in to get treatment for that health issue."*

- Some of the interviewees found that emphasising improvements in life expectancy was a useful means to motivate Asian patients to be compliant with suggested treatment.

> *"You can't tell them to do something because it's really good for you. You have to tell them to do it because this is going to save your life."*

- Most of the health service providers found that Asian patients have very high expectations of the medical care that they receive, both in terms of the timeliness of medical care provided and the ability of the treatments offered to 'cure' them.

> *"Asians as a group have a higher expectation... And in that group the ones who are migrants in the last 15 years have even higher expectations. Most of the time the reasons for migration are either the education of children and/or better health services, or subsidised health services, meaning free health services."*

Health practices

- Asian patients, particularly younger patients and those who have been in New Zealand for some time, are generally reasonably proactive about attending appointments and accessing health care for non-stigmatised conditions.

- Alternative types of therapy are commonly sought among Asian patients. One health service provider commented that older Asian people are more likely to try traditional methods before following mainstream medical advice.

> *"They also practice a lot of the alternative types of therapy. Homeopathy and Ayurvedic therapies are quite common (among Indian patients) and a lot of them try these first for solving their ailments before they would come to western medicine, and that is also true for the Chinese patients, they would try their traditional Chinese therapies also."*

- Post-natal practices among Asian families may be different to mainstream post-natal practices in New Zealand.

> *"So lots of cultural issues...we want (the baby) to get sunlight purely because they're jaundiced but they're usually well wrapped up. And we've got the feeding issues as well, because (the mums) will still try and bottle feed..."*

- Asian patients may seek treatment overseas to overcome long waiting lists for medical conditions that are not prioritised by district health boards, such as hernias and varicose veins.

Differences in gender roles

Certain Asian groups, particularly Indian and Muslim communities, tend to have relatively defined gender roles.

- Asian cultures tend to be patriarchal.

> *"We come from a very masculine culture...in a masculine society we are very competitive, we want to be successful, everything is about gaining success and building."*

- Some Asian men will speak on behalf of female family members, both because the women may be less proficient in English but also because this may be culturally appropriate for them to do so.

> *"Sometimes, the husband comes in and he talks on behalf of the wife and a lot of times I've had other people talk about how the woman was not speaking and she should have had the chance to speak, and I say to them you have to see it from their perspective.... the woman was probably okay for the husband to speak because she feels comfortable that the husband is speaking on her behalf."*

- Women, particularly older Indian and Muslim women, tend to dress conservatively and may be uncomfortable being examined if this requires body exposure.

- Asian people will often prefer to have an interpreter and to be treated by a health professional of the same gender.

21.3 Barriers to Appropriate Health Care

Language

Language difficulties were identified by all interviewees as a barrier to Asian people accessing appropriate health care.

- Language barriers are a major issue for Asian patients, particularly Chinese, Korean, and older Asian people.

- Interpreters are available and frequently utilised for scheduled appointments or meetings, but communication issues still occur during day-to-day interactions for patients in an inpatient setting or during home visits. However, in some cases the person booking an appointment may not be aware of language barriers and so may not request an interpreter, leading to a waste of both the health professional's and the family's time.

- Chinese and Indian patients are generally aware of their entitlement to interpreting services, due to promotion through their community media and at local cultural events. However, Asian people belonging to smaller communities may not be aware that funded interpreting services are available.

- Language issues increase the workload for health service providers and the length of appointments with Asian patients who are not proficient with English.

- Health information, appointment letters and hospital signs that are written in English are not useful for Asian patients that cannot speak or read English.

> *"One woman said: 'So, I got a brochure and it had a bunch of phone numbers on it,' but she said, 'Having to make a call was impossible because I didn't know who I should call first and then it had to be in English.' So, a brochure that would help a mainstream family was no help at all."*

- Some Asian people, including many elderly people, may be illiterate even in their own language so even translated health information may be difficult for them to understand.
- Some health professionals utilise interpreters who are not properly qualified, including family members or friends of the patients. This can lead to a break-down in communication with the patient, both because information may be withheld from the patient but also because the patient may be reluctant to disclose certain health concerns.

> *"Family members may not like to upset the patient, and they may lie to us, or they may not be truthful in terms of interpreting because they don't want to upset the other person. Or the family members may be very good in day to day language but they may not be able to explain a medical problem."*

> *"...often you'll get a student come down and their mate will come with them, to help them out. That's not ideal...maybe there would be more things that they'd want to disclose."*

Lack of knowledge of the New Zealand Health System

- All the health service providers interviewed acknowledged that lack of familiarity with the New Zealand health system and the services available was an issue among recent Asian migrants.
- Several interviewees observed that the interface between primary and secondary care in New Zealand was not well understood by Asian migrants. Recent Asian migrants sometimes present directly to hospital with issues that could have been addressed by a general practitioner, because they are unaware of the availability of primary care in New Zealand.

> *"They come from a different country where (the health system) is quite different from how it is here, especially primary care. They don't even know that they have to enrol with a GP."*

Lack of knowledge of the New Zealand health system creates additional work for health service providers.

> *"And not being able to speak the language sometimes and not being able to access or educate themselves, as to how the health system in this country runs; it creates more work for us because then we have to do that job; the nurses have to do the job, the reception staff have to do the job; to tell them what is an enrolment process. Why do you need to be enrolled in a practice? Why can't you move from one practice to the other practice as easily as you could do in your home country?"*

- The fragmentation of mental health and disability service delivery in Auckland at present makes these services particularly hard for Asian patients to negotiate.

Cultural Differences in Assessment and Treatment

- Several of the health service providers noted that Asian migrants in Auckland frequently make assumptions about how medical care will be provided, and consequently may feel that they have been treated inadequately or inappropriately.

> *"People like myself and people from China, we're so used to having an injection to give us immediate intervention if we have a high fever....So here if you are seeing a GP within the first few days they actually say there's nothing they can do, just take Panadol. So from an Asian perspective, a lot of us expect practical things or something a bit more substantial."*

> *"So, for example, providing services in a child care setting alarmed parents because their child might get labelled as disabled to other parents and then the child would be ostracised."*

- Asian migrants may also assume that medical records will be shared between services.

> *"So (the patients) need coaching to make sure they tell everything so they don't assume that (the health professional) knows anything (about their previous medical history).*

- Auckland health service providers frequently make assumptions around Asian patients' medical knowledge or awareness of available services and facilities.

> *"The services make the assumptions that the families know what they're doing. They assume that they're like mainstream families and that they understand (the treatment process). They also assume that once they've told the families they understand it or if they've given the families a brochure they understand it."*

Lack of Cultural Competency among Health Professionals

- One interviewee commented that greater awareness is required among health service providers as to which Auckland communities are represented by the term 'Asian'.
- Lack of understanding by health professionals of common cultural practices, beliefs and language difficulties among Asian people can have significant effects on the quality of medical care provided.

> *"One Asian older lady had suffered a fall and had recovered but then decided to sleep on the floor in her hospital room. (Asian Cultural Support Services) were called by the nurse who assumed that the patient may have dementia and delayed her discharge, at a cost of $1000 per night. In actual fact, when the cultural support worker spoke to the lady, it became clear that the woman was not demented –rather sleeping on a hard surface is actually normal cultural practice in an Asian country. The nurse then asked the cultural support worker to ask the lady why she still had toileting problems as the patient had worn nappies during her stay. The patient replied 'I didn't know where the toilet was as no-one told me'"*

- Health services and health professionals that are not culturally competent often fail to develop trust and engagement with Asian patients in Auckland.

Stigma and Perceived Lack of Confidentiality

- Asian patients in Auckland are less likely to seek medical care for health issues, such as disability or mental health concerns, which are stigmatised in their communities.
- One health service provider noted the reluctance of some Asian patients to utilise an interpreter from the same community due to concerns about breach of confidentiality regarding disclosed health concerns.

Other Barriers

- Asian women and older people are often reliant on other family members to provide transport to attend medical appointments.

> *"We've got lots of patients who rely on family members to bring them in for appointments, 'cause a lot of sons or daughters will take time off on the day to bring their mother or father in. So that becomes a little bit of a barrier because if you need to see them again, you try to negotiate how else, and sometimes you have to delay the appointment because that will cost another day off for the son or daughter."*

- Cost is a barrier to accessing medical care for some Asian families

> *"You get a rich class of Asians... they can purchase wherever they want but you do have the middle and the low income group who have nothing and they have to depend on a family to support them. Yes it is hard for them. It's restrictive, definitely."*

- Some Asian families, particularly those that have recently emigrated, lack adequate social supports to assist with accessing medical care.

21.4 Facilitators to Appropriate Health Care

Education about the New Zealand Health System

- All the health service providers interviewed stressed the importance of providing Asian migrants with education regarding the basic structure of the New Zealand health system, and an overview of available services.
- This education is best delivered through multiple formats, including written material for individuals and families, items in community media, and talks at community organisations and temples.

Health Promotion and Health-Related Education

- Many of the interviewees mentioned the importance of health promotion for Asian communities, even though recent Asian migrants tend to be unfamiliar with the concept of disease prevention.

> *"I tell them that here in this country we don't wait for the disease to have its full blown scenario; we try to protect and prevent, that's why you're taking all these medicines. But that's quite an alien concept to a lot of the patients."*

- Education for both health professionals and Asian communities about common health issues affecting Asian people in New Zealand, including both physical and psychological conditions, also improves access to medical care, the quality of care provided and treatment compliance.

Culturally Competent Health Professionals and Services

- All of the interviewees acknowledged the benefit of cultural competence training for health professionals to improve their ability to communicate and interact with Asian people.

> *"Improving cultural awareness, for example through the cross-cultural training, is so important because people need to be aware of the cultural differences (between themselves and Asian people) and how to bridge the gap and get the best outcome."*

> *"A lot of the Asians still hold on to their cultural beliefs and they have the right to practice whatever they want to practice. I think we have to change the way we approach them - we don't have to believe what they believe, but we do need to ask what they want to do, and how they would do things according to their cultural needs, rather than dictating to them."*

- Culturally sensitive health services and professionals are likely to provide more appropriate care for Asian patients in a number of ways including:
  - Giving Asian patients the option of scheduling appointments with a health professional of the same gender
  - scheduling longer appointment times for consultations where an interpreter will be involved
  - scheduling an evening or weekend appointment for patients who may not be able to come during normal work hours.

- One health service provider noted that improved understanding by health professionals and services of the common health and cultural issues faced by Asian patients improves the ability of these services to advocate on behalf of Asian patients when necessary.

- Culturally sensitive health services are more likely to have funding models that enable delivery of services that meets the needs of Asian people.

> *"We're trying a new funding mechanism that has some advantages for Asian families...because you have the opportunity to employ your own home help and you can get someone from your own ethnic background. It's got more flexibility and it might make more culturally appropriate services accessible."*

> *"...if we look at funding issues, most of the funding is targeting individuals and not the whole family. I think we probably need to do a little more in this area."*

Asian Health Workforce

- All of the health service providers commented that Asian patients generally feel more comfortable with a health professional of the same ethnicity.

> *"Going back 20 years when there were very few of us (Asian health professionals) in the workforce. Now there are a fair number who are doing a very good job at the various levels and that obviously makes it easier for our people to feel relaxed."*

- Having a health professional of the same ethnicity can often assist greatly with language barriers for Asian patients.

- One health service provider commented that Asian health professionals are more likely get an accurate history from Asian patients, and are also more likely to give medical advice that is feasible given the cultural practices of their patients.

> *"For me, it is very easy to understand and know whether the patient is telling you the truth, because I understand the culture so well. If they tell me that they never do this or that they always do this; you know that it doesn't really work like that in our culture... it's not that simple."*

- The number of Asian health professionals has increased over recent years but all of the interviewees identified further development of the Asian workforce, matched to the ethnic composition of populations served, as key priority in the health sector.

> *"Asian workforce development is so important - it's huge... it's just huge!"*

- Another health service provider cautioned against the assumption that a health professional and a patient from the same Asian ethnic group would have the same cultural values, since cultural practices among people from a particular geographic region in Asia can be varied but also due to the effect of acculturation.

Support for Asian Patients

- WDHB has a dedicated cultural support service that assists Asian people in a number of ways including:
  - in an inpatient setting
  - provision of translated health information where requested
  - a phone-in system for Chinese and Korean non-English speaking patients with queries following discharge or who want to be navigated to a particular health service.
  - a phone-in service to support Chinese and Korean non-English speaking women through the process of breast screening.

> *"Cultural staff are there to be the in-between person for both the clinician and the patient...the cultural staff engage (the patient) a little bit more, build the rapport, provide cultural advice and also can be a mediator or advocate for the client."*

- Interpreting services
  - The availability of face-to-face interpreters for medical consultations in a secondary and tertiary setting was commended by most interviewees.
  - Telephone interpreters are also available but many of the health service providers commented that this option was associated with greater logistical issues and was therefore less preferable than face-to-face interpreting.
  - The presence of an interpreter often makes the patient feel more relaxed which facilitates the process of building rapport and trust between the service and the patient.

- Community support groups (eg for parents of Asian children with disabilities, for women who have experienced family violence etc) were mentioned by several interviewees as an effective means to reduce the isolation and mental health issues frequently experienced by Asian migrants. These support groups are also a useful forum in which to obtain feedback about the effectiveness of particular health services for Asian communities in Auckland.

Targeted Services

Health services and programmes that target Asian people in Auckland appear to be effective. Some examples are listed below:

- The diabetes nurse specialist who works half-time with South Asian patients at ADHB has been effective in providing support, raising awareness, promoting engagement and improving diabetes management among South Asian people. In addition, she also works half-time in the community to provide health promotion regarding diabetes and other health issues of importance to the South Asian people, to support and advise any health-related programmes for South Asians, and as a health advocate on behalf of the South Asian community where necessary.
- The Asian mental health services at ADHB provide a short-term link between Asian patients across the age spectrum and mainstream mental health services. Depending on what is required, the Asian Mental Health Service can provide assistance in obtaining a diagnosis, in delivering an intervention or in promoting trust and relationship-building between the clinician and the Asian patient.
- The WDHB Asian cultural support is well known and highly regarded among the Chinese and Korean communities in Auckland, and often receives self-referrals from Asian people residing in ADHB or CMDHB.
- Cultural case workers in WDHB are extremely effective in assisting families of Asian children with disabilities to access appropriate disability support services. In many cases, these case workers are able to connect these families with other families of disabled children from the same community, assist them in organising appropriate home help, help them to enrol with a PHO, and advocate on their behalf if necessary.
- Arrogya was a temple-based health promotion initiative undertaken in Total Health Otara PHO that was successful in increasing awareness of healthy eating practices and the benefits of increased physical activity.

Co-ordinated Service Delivery

Good co-ordination and linkage of services is important for Asian people in Auckland. Many health service providers commented on the frequent need to liaise with other health and social services regarding their Asian patients.

> *"(Asian patients) want to be able to get into the DHB at one point of entry and able to be facilitated to whatever they need."*

> *"CMDHB let (Procare GPs) have access to their computer system at Middlemore so that we can know what the patient's blood tests were like, even though it was done somewhere else or by some other doctor, and what medication they've been taking, what they had before and also once patients present to the ED I get the discharge letter within about six hours via computer. They're really, really good."*

Evaluation of Services

- One health service provider noted that obtaining regular feedback from Asian communities regarding the effectiveness of available health services and barriers to accessing care was essential to ensuring the delivery of accessible and culturally appropriate health care.

21.5 Unmet Needs

Targeted Health Promotion, including Health Education

All the health service providers interviewed stressed the need for further targeted health promotion for Asian people in Auckland, including:

- More health promotion around physical activity, healthy diet, and being smoke-free as well as specific health issues that commonly affect Asian communities in Auckland, such as CVD, diabetes, depression, anxiety, other mental health issues, disability and family violence.
- Education regarding the structure of the New Zealand health system and available services, including interventions for smoking cessation.

Health education could be provided as face-to-face community-based sessions run by skilled trainers, or as translated and culturally appropriate written material. One interviewee noted that in some cases, appropriate resources already exist but need to be further publicised. For example, a written guide to the New Zealand health system has been translated into Chinese languages and Korean and is available on the Department of Labour website.

Greater Prioritisation of Asian Health Needs

Several interviewees commented that the Ministry of Health needs to give Asian health needs greater priority than at present and made the following points:

- Health data should routinely be collected for the overall Asian group at a minimum, and for Level Two Asian ethnic groups in relation to certain health issues such as CVD or diabetes.
- One interviewee noted that a small but growing body of research exists regarding the health and social status of Asian people in Auckland, and greater action to address identified issues is required.
- The Health Research Council should consider increased funding for Asian health research. One interviewee mentioned Health of Older Asian people as a priority area for further research, while another health service provider anecdotally observed that Fijian Indian people may have different health profiles to Indian people from India, but there is a dearth of quantitative research in this area.

Improved Cultural Competence of Services

- A number of health service providers noted that expansion of DHB-based Asian Cultural Support Services would be useful.
- Several interviewees noted the availability of high-quality cultural competence resources on the CALD website and felt that these should be used more widely by health professionals in primary and secondary care.
- There is a need for more culturally appropriate and translated health information booklets regarding specific health issues such as CVD (including life after a major cardiovascular event), diabetes and mental health issues.

Asian Health Workforce Development

All the health service providers emphasised the need for development of the Asian health workforce, matched to the ethnic composition of populations served:

- Targeted scholarships could be used to encourage more Asian people to train in health-related disciplines. More bridging programmes are also required to assist overseas-trained Asian health professionals to be able to participate in the health and disability workforce in New Zealand. Priority areas for Asian workforce development are CVD, diabetes, mental health, health of older people and disability support services.
- More home help workers are necessary to assist Asian people affected by disabilities or elderly Asians in languages other than English. The possibility of subsidising English language courses to facilitate training for Asian migrants who could fill these roles could be explored.

Improved Availability and Access to Asian Mental Health Services

In addition to increasing the number of Asian mental health professionals, interviewees stressed the need for the following:

- Greater co-ordination and integration of Asian and mainstream service providers across the health spectrum in the three DHBs in Auckland, to facilitate greater access to mental health services among Asian people. Better links between Auckland health service providers is particularly important since any physical health or social issue can contribute to mental health issues.
- The existing Asian mental health service models currently operating in the Auckland region need to be expanded and further developed, as greater support for Asian patients with mental health issues is required in both DHB-funded services and by NGOs.

Greater Co-ordination of Disability Services and Culturally-appropriate Respite Care for Asian Families

In addition to providing further education for Asian families about the New Zealand Health System and the disability support services available, and increasing the number of Asian health professionals working in disability services, interviewees mentioned the following areas of unmet need:

- A strategic approach is required across the three Auckland DHBs to needs assessment and disability support service delivery for Asian families, to ensure that affected families do not 'fall through the cracks'.
- There is an urgent need for more culturally appropriate respite services.

Increased Awareness and Early Intervention for Family Violence

- There is a need for early interventions aimed at preventing family violence among Asian families. Information regarding family violence and available support services could be offered as part of family education programmes in a community setting for Asian people.
- Asian community and religious leaders need to be educated about family violence and available support services so that they can provide appropriate advice if family violence is disclosed to them.

Greater awareness and availability of Culturally-Appropriate Care for Older Asian people

- A number of interviewees identified a need for greater awareness among Asian communities of current options for care of older Asian people, including home-based support, some culturally-appropriate residential care facilities and day programmes offered by organisations such as Shanti Niwas.
- As Auckland Asian populations increase in size, more culturally-appropriate residential and private hospital facilities will be required for older Asian people, including Other Asians who currently have very few options available.

Other

- Several health service providers mentioned the need to improve awareness among health professionals in Auckland as to which communities are encompassed by the Statistics New Zealand ethnic group 'Asian'.
- Several interviewees also noted the need for greater collaboration between health services regarding care for Asian people in Auckland, particularly around evaluation and planning of services.
- Two health service providers suggested that availability of community centres, libraries, public transport and other public facilities should be publicised more widely among Asian communities in Auckland to encourage utilisation of these facilities and reduce social isolation among migrants.
- One health service provider noted that Asian patients with chronic pain who are referred to pain clinic often have unrealistic expectations about what the pain team can achieve. It would be useful for the pain clinic to send a copy of the appointment letter to the primary care practitioner at the time that this is sent to the patient, so the GP can talk to the patient about what to expect.

> *"Pain Clinic is a big problem because everybody that goes there says it's a waste of time. Quite a lot of my Asian patients just don't get it, so I actually like to prime them up. I say, 'Look they're not gonna take away your pain but you're having problems coping with your pain, and we can take that away for you, would you like that?' So I think that the Pain Clinic might want to consider actually sending a letter to the patient's GP beforehand"*

21.6 Summary of Health Service Provider Interviews

Key Issues Concerning the Health Needs of Asian Communities in Auckland

- Lack of preventive behaviours such as healthy eating and adequate exercise and high anecdotal prevalence of smoking
- High and increasing burden of CVD and diabetes among South Asian people
- Significant burden of mental health issues coupled with lack of awareness among Asian communities about mental illness and available services
- Reluctance to access residential care facilities for older Asian people, and the occurrence of elder abuse
- Delayed service access by Asian families affected by disability due to stigma and lack of awareness of available services
- Sexual health issues, particularly around increasing termination of pregnancy rates among Asian students
- Family violence
- Significant immigration and settlement stress.

Key Cultural Differences

- Asian cultures tend to be hierarchical and collectivistic.
- Religion is generally important to Asian people.
- Certain health issues, such as mental illness, family violence and disability, are very stigmatised in Asian communities.
- Asian people tend to be proactive about seeking health care for non-stigmatised conditions, have high expectations of health providers and frequently utilise alternative therapies
- There are distinct gender roles in many Asian cultures.

Barriers to Appropriate Health Care

- Language
- Lack of knowledge of the New Zealand health system
- Cultural differences in assessment and treatment leading to assumptions by health professionals and Asian patients during medical interactions about the medical care that will be provided, and the knowledge of the other party
- Lack of cultural competency among health professionals
- Stigmatisation associated with health issues such as mental illness and disability
- Concerns about lack of confidentiality
- Transport and cost issues.

Facilitators to Appropriate Health Care

- Education about the New Zealand health system and other health-related education
- Health promotion around preventive behaviours and key health issues
- Improving the cultural competence of health professionals and services
- Development of the Asian health workforce
- Inpatient supports for Asian patients (cultural support and interpreting services) as well as community support groups
- Providing targeted services for Asian communities in Auckland, such as the South Asian diabetes nurse practitioner in ADHB
- Co-ordination and linkage of health services for Asian people
- Obtaining regular feedback from Asian communities about health services.

Unmet Needs

- More targeted health promotion for preventive behaviours and specific health issues such as CVD and diabetes, and further health education around the structure of the New Zealand health system
- Greater prioritisation of Asian health needs where appropriate, including adequate monitoring of Asian health outcomes
- Improved cultural competence of services
- Adequate development of the Asian health workforce
- Improved availability and access to mental health services
- Greater co-ordination of disability services and culturally-appropriate respite care for Asian families
- Increased awareness and early intervention for family violence
- Greater collaboration between health services regarding care for Asian people in Auckland, particularly around evaluation and planning of services
- Improved opportunities for overcoming social isolation among Asian migrants.

22. Recommendations

On the basis of the quantitative and qualitative data presented in this report, the following actions are recommended:

1. Appropriate recognition of Asian health needs in regional and national health-related policy, planning and monitoring

- Greater recognition of the health needs of Asian people is required. The three Auckland DHBs should consider advocating for the health needs of Asian people to be acknowledged where appropriate in health-related policy, planning, monitoring and reporting at a national level (eg national health targets) and at a regional level (eg Northern Region Health Plan, annual plans and DAPS).
- Regarding monitoring for Asian people in Auckland, the three Auckland DHBs should consider advocating for the following:
  - Whenever health data is collected by ethnic group in Auckland, data should be routinely collected and reported for the 'Asian' group at a minimum and for Asian ethnic sub-groups where possible, particularly for key health issues such as CVD, diabetes, disability and mental health. It is important to monitor and report the health outcomes of the Asian population in Auckland, even for those health issues which are not currently prevalent (such as breast cancer) to detect increasing burden of disease related to acculturation.
  - Consistent use of the ethnic coding by Statistics New Zealand for Asian ethnic groups at national, DHB, PHO and NGO levels
  - A review by Statistics New Zealand of whether the 'Indian' ethnic group should be replaced by 'South Asian'.

2. More health promotion, including health-related education

- Further health promotion among Asian communities in Auckland should be considered for:
  - Preventive behaviours such as healthy eating, adequate physical exercise, being smoke-free and cervical screening
  - Specific health issues such as CVD, diabetes, oral health (particularly among children), asthma, family planning and contraception, as well as health issues associated with stigma in Asian communities such as disability, mental illness, and family violence.
- Asian communities in Auckland require culturally-appropriate written information regarding the structure of the New Zealand health system, including wider dissemination of resources that are already available. Appropriate community sessions and local community media messages should also be considered.
- Education regarding key health needs for Asian communities in Auckland should be considered as part of continuing medical education for general practitioners and other health professionals.

3. Consider more targeted health services for Asian people

The following targeted services and interventions for Asian communities in Auckland should be considered within current mainstream health service provision:

- Consideration of more Asian-focussed CVD and diabetes nurse practitioners
- Expansion and further development of existing Asian mental health service models currently operating in the Auckland region, including support provided in both DHB-funded and NGO sectors
- Early intervention for family violence, through provision of information in a community setting about the issue and available services
- Family planning and contraception advice, including for Asian international students
- More culturally-appropriate disability respite services
- More culturally-appropriate residential care facilities for older Asian people
- Culturally-appropriate community oral health services, particularly for Asian children.

4. Improve the quality of PHO enrolment data and access to primary care services for Asian people

- The quality of PHO enrolment data needs to be improved, including:
  - The accuracy of ethnicity coding
  - The accuracy of domicile data
  - Re-estimation of PHO enrolment rates for Asian populations in the Auckland region once the next census is conducted and accurate population counts are available.
- Interventions are required to increase PHO enrolment rates for Chinese people across Auckland, and Indian and Other Asian people in WDHB.

5. Reduce cultural and language barriers to appropriate health care for Asian people

- Culturally and linguistically diverse (CALD) cultural competence training and resources are freely available to the health and disability workforce across the Auckland region. These resources need to be used more widely.
- Further expansion of cultural support services for Asian people should be considered as part of health service provision in the Auckland region.
- Allocation of additional resources for development of the Asian health workforce according to the ethnic composition of the populations served should be considered. Targeted health scholarships would be useful to encourage further training of Asian health professionals. More bridging courses would also be desirable, particularly in nursing and allied health, to enable overseas-qualified Asian health professionals to register and participate in the Auckland health workforce. Further recruitment of language-matched carer-support workers is also required for non-English speaking families in the home-based support sector.
- Increased awareness is needed among health service providers, particularly GPs, regarding the benefits of using qualified interpreters.
- Additional funding should be considered for English as a Second Language (ESOL) courses, to increase the number of Asian people attending these courses.

6. Promote greater collaboration between health services for Asian people in the Auckland region

- Raised awareness is required among health service providers of the comprehensive list of Auckland Asian, migrant and refugee services, programmes and initiatives currently available on the CALD website.
- Sharing of service delivery models of evaluation and research for Asian population health outcomes between the three DHBs is useful when planning services.

7. Improve social capital among Auckland Asian communities

- Funding to initiate and maintain community support groups for Asian people affected by disability, mental illness, family violence and other key health issues should be considered by Auckland DHBs.
- Increased awareness of charitable organisations that provide support services to Asian people, including Shanti Niwas (for older Asian people) and Umma Trust (for women and children), is required.
- The availability of community centres, libraries, public transport and other public facilities should be publicised more widely among Asian communities in Auckland to encourage utilisation of these facilities and reduce social isolation among migrants.
- Consultation with Asian community leaders and community groups should be sought when evaluating existing health services or planning additional health services.

8. Future research

Further research is required in the following areas:

- A repeat health needs assessment of Asian people across the Auckland region should be undertaken in 4-5 years to identify health outcome and service utilisation trends over time
- Consultation with Auckland Asian communities regarding health needs and barriers to accessing appropriate care
- The effects of acculturation on the health of Asian migrants and subsequent generations in Auckland
- The health profiles of Fijian Indians as compared to other 'Indians' to determine if there are important differences
- Health of older Asian people as data for Asian ethnic sub-groups becomes available in the future
- Falls or pressure sores occurring in residential care.
- Osteoporosis and sun exposure among Asian sub-groups.
- The prevalence of disability among Auckland Asian communities.

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24. Appendices

24.1 Appendix 1: Ethnicity Classification and Codes

Table 82: Prioritisation for Level 2 ethnicity

Priority order	Ethnic Group Code	Ethnic group code description
1	21	Maori
2	35	Tokelauan
3	36	Fijian
4	34	Niuean
5	33	Tongan
6	32	Cook Island Maori
7	31	Samoan
8	37	Other Pacific People
9	30	Pacific People NFD
10	41	Southeast 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	61	Other Ethnicity
19	54	Other
20	12	Other European
21	10	European NFD
22	11	New Zealand European
23	94	Don't know
24	95	Refused to answer
25	97	Response unidentifiable
26	99	Not stated

Source: Ministry of Health. 2011. Ethnicity protocols for the health and disability sector. Wellington. Ministry of Health
NFD: not further defined

Table 83: Level 3 ethnicity codes

100	European NFD
111	New Zealand European
120	Other European NFD
121	British and Irish
122	Dutch
123	Greek
124	Polish
125	South Slav
126	Italian
127	German
128	Australian
129	Other European
211	Maori
300	Pacific Peoples NFD
311	Samoan
321	Cook Islands Maori
331	Tongan
341	Niuean
351	Tokelauan
361	Fijian
371	Other Pacific Peoples
400	Asian NFD
410	Southeast Asian NFD
411	Filipino
412	Cambodian
413	Vietnamese
414	Other Southeast Asian
421	Chinese
431	Indian
441	Sri Lankan
442	Japanese
443	Korean
444	Other Asian
511	Middle Eastern
521	Latin American
531	African
611	Other Ethnicity
944	Don't know
955	Refused to answer
977	Response unidentifiable
999	Not stated

Table 84: Level 4 ethnicity codes

10000	European NFD
11111	New Zealand European
12100	British NFD
12111	Celtic
12112	Channel Islander
12113	Cornish
12114	English
12115	Gaelic
12116	Irish
12117	Manx
12118	Orkney Islander
12119	Scottish (Scots)
12120	Shetland Islander
12121	Welsh
12199	British NEC
12211	Dutch/Netherlands
12311	Greek (including Greek Cypriot)
12411	Polish
12500	South Slav (formerly Yugoslav groups) NFD
12511	Croat/Croatian
12512	Dalmatian
12513	Macedonian
12514	Serb/Serbian
12515	Slovene/Slovenian
12516	Bosnian
12599	South Slav (formerly Yugoslav groups) NEC
12611	Italian
12711	German
12811	Australian
12911	Albanian
12912	Armenian
12913	Austrian
12914	Belgian
12915	Bulgarian
12916	Belorussian
12917	Corsican
12918	Cypriot Unspecified
12919	Czech
12920	Danish
12921	Estonian
12922	Finnish
12923	Flemish
12924	French
12925	Greenlander
12926	Hungarian
12927	Icelander
12928	Latvian
12929	Lithuanian
12930	Maltese
12931	Norwegian
12932	Portuguese
12933	Romanian / Rumanian
12934	Romany / Gypsy
12935	Russian
12936	Sardinian
12937	Slavic / Slav
12938	Slovak
12939	Spanish
12940	Swedish
12941	Swiss
12942	Ukrainian
12943	American (US)
12944	Burgher
12945	Canadian
12946	Falkland Islander / Kelper
12947	New Caledonian
12948	South African
12949	Afrikaner
12950	Zimbabwean
12999	European NEC
21111	Māori
30000	Pacific peoples NFD
31111	Samoan
32100	Cook Island Māori NFD
32111	Aitutaki Islander
32112	Atiu Islander
32113	Mangaia Islander
32114	Manihiki Islander
32115	Mauke Islander
32116	Mitiaro Islander
32117	Palmerston Islander
32118	Penrhyn Islander
32119	Pukapuka Islander
32120	Rakahanga Islander
32121	Rarotongan
33111	Tongan
34111	Niuean
35111	Tokelauan
36111	Fijian (except Fiji Indian / Indo-Fijian)
37111	Admiralty Islander
37112	Australian Aboriginal
37113	Austral Islander
37114	Belau / Palau Islander
37115	Bismark Archipelagoan
37116	Bougainvillean
37117	Caroline Islander
37118	Easter Islander
37119	Gambier Islander
37120	Guadalcanalian
37121	Guam Islander / Chamorro
37122	Hawaiian
37123	Kanaka / Kanak
37124	I-Kiribati / Gilbertese
37125	Malaitian
37126	Manus Islander
37127	Marianas Islander
37128	Marquesas Islander
37129	Marshall Islander
37130	Nauru Islander
37131	New Britain Islander
37132	New Georgian
37133	New Irelander
37134	Ocean Islander / Banaban
37135	Papuan / New Guinean / Irian Jayan
37136	Phoenix Islander
37137	Pitcairn Islander
37138	Rotuman / Rotuman Islander
37139	Santa Cruz Islander
37140	Society Islander (including Tahitian)
37141	Solomon Islander
37142	Torres Strait Islander / Thursday Islander
37143	Tuamotu Islander
37144	Tuvalu Islander / Ellice Islander
37145	Vanuatu Islander / New Hebridean
37146	Wake Islander
37147	Wallis Islander
37148	Yap Islander
37199	Other Pacific peoples NEC
40000	Asian NFD
41000	Southeast Asian NFD
41111	Filipino
41211	Khmer / Kampuchean / Cambodian
41311	Vietnamese
41411	Burmese
41412	Indonesian (including Javanese / Sundanese / Sumatran)
41413	Lao / Laotian
41414	Malay / Malayan
41415	Thai / Tai / Siamese
41499	Other Southeast Asian NEC
42100	Chinese NFD
42111	Hong Kong Chinese
42112	Kampuchean Chinese
42113	Malaysian Chinese
42114	Singaporean Chinese
42115	Vietnamese Chinese
42116	Taiwanese Chinese
42199	Chinese NEC
43100	Indian NFD
43111	Bengali
43112	Fijian Indian / Indo-Fijian
43113	Gujarati
43114	Tamil
43115	Punjabi
43116	Sikh
43117	Anglo Indian
43199	Indian NEC
44100	Sri Lankan NFD
44111	Sinhalese
44112	Sri Lankan Tamil
44199	Sri Lankan NEC
44211	Japanese
44311	Korean
44411	Afghani
44412	Bangladeshi
44413	Nepalese
44414	Pakistani
44415	Tibetan
44416	Eurasian
44499	Other Asian NEC
51100	Middle Eastern NFD
51111	Algerian
51112	Arab
51113	Assyrian
51114	Egyptian
51115	Iranian / Persian
51116	Iraqi
51117	Israeli / Jewish / Hebrew
51118	Jordanian
51119	Kurd
51120	Lebanese
51121	Libyan
51122	Moroccan
51123	Omani
51124	Palestinian
51125	Syrian
51126	Tunisian
51127	Turkish (including Turkish Cypriot)
51128	Yemeni
51199	Middle Eastern NEC
52100	Latin American / Hispanic NFD
52111	Argentinian
52112	Bolivian
52113	Brazilian
52114	Chilean
52115	Colombian
52116	Costa Rican
52117	Creole (Latin America)
52118	Ecuadorian
52119	Guatemalan
52120	Guyanese
52121	Honduran
52122	Malvinian (Spanish-speaking Falkland Islander)
52123	Mexican
52124	Nicaraguan
52125	Panamanian
52126	Paraguayan
52127	Peruvian
52128	Puerto Rican
52129	Uruguayan
52130	Venezuelan
52199	Latin American / Hispanic NEC
53100	African NFD
53112	Creole (US)
53113	Jamaican
53114	Kenyan
53115	Nigerian
53116	African American
53117	Ugandan
53118	West Indian / Caribbean
53119	Somali
53120	Eritrean
53121	Ethiopian
53122	Ghanaian
53199	Other African NEC
61111	Central American Indian
61112	Inuit / Eskimo
61113	North American Indian
61114	South American Indian
61115	Mauritian
61116	Seychelles Islander
61117	South African Coloured
61118	New Zealander
61199	Other NEC
94444	Don't know
95555	Refused to answer
97777	Response unidentifiable
99999	Not stated

24.2 Appendix 2: ICD 10 AM codes

Potentially avoidable mortality (PAM) Condition description	ICD-10 Diagnosis codes
Pulmonary tuberculosis	A15
Meningococcal disease	A39
Pneumococcal disease	J13, A403, G001
HIV/AIDS	B20-B24
Other respiratory infections	J00-J06, J12, J15, J18-J22
Cancer - Stomach	C16
Cancer - Rectum	C19-C21
Cancer - Melanoma	C43
Cancer - Female breast	C50
Cancer - Cervix	C53
Cancer - Testis	C62
Cancer - Prostate	C61
Cancer - Thyroid	C73
Cancer - Bone and Cartilage	C40
Cancer - Hodgkins	C81
Cancer - Acute lymphocytic leukemia	C91
Complications of pregnancy	O01-O99
Complications of the perinatal period	P02-P94
Congenital heart disease	Q21
Diabetes	E10-E14
Valvular heart disease	I01, I05-I09, I33-I37
Hypertensive disease	I10-I15
Coronary heart disease	I20-I24 except I241, I258, I2511, E1150, E1159, E1450, E1459, I46, I461, R96, R98
Stroke	I60-I62, I63, 164, I66, I678
Peripheral vascular disease	I65, I710, I1711, I1713, I1715, I1718, I74, I7021, I7022, II7023, I7024, E1052, E1452
Cardiovascular disease overall	Coronary heart disease, stroke, peripheral vascular disease
Congestive Heart Failure	I50
Renal failure	N17-N18
Pulmonary embolism	I26
CORD	J42
Asthma	J45-J46
Peptic ulcer disease	K25-K26
Cholelithiasis	K80
Suicide	X60-X84
Road traffic accidents	V01-V79, V87, V89, V99
Falls (fracture neck of femur)	W00-W19
Burns	X00-X19
Adverse health care events	Y40-Y84
Potentially avoidable hospitalisations (PAH) Condition description	**ICD-10 Diagnosis codes**
Tuberculosis	A15-A19, B900-B909, M011, P370
Immunisation preventable - Hib	A413, A492. B9631, B9639, G00,
Immunisation preventable - MMR	B05, B06, B26, M014, P35
Immunisation preventable – Whooping cough	A37
Immunisation preventable-Other	A33-A36, A80
Respiratory infections- acute bronchiolitis	J21

Respiratory infections-pneumonia	J13-J16, J18
Respiratory infections-other	J00, J06, J10-J11, J20
Kidney/urine infection	N10, N12, N136, N390
Gastroenteritis	A01-A09
Cellulitis*	H000, H010, H050, J340, K122, L01-L04, L08, L980
Meningococcal infection	A39, M010, M030
Legionnaires' disease	A481, A482
Ear infections	H65-H67, H70, J01-J03
Other Infections	A23, A26, A28, A32, A38, A46, B50-B54, P23, P351, P352, P358, P359, P36, P371-P379
Sexually transmitted disease except HIV	A50-A59, A60, A63, A64, I980, M023, M031, M730, M731, N290, N341, N70-N77, O00
HIV/AIDS	B20-B24
Hepatitis	B15-B19
Liver cancer	C220, C221, C229, P353
Skin cancers	C00,C43-C44
Oral cancers	C01-C06, C09, C10
Colo-rectal cancer	C18-C21
Lung cancer	C33-C34
Breast cancer	C50
Cervical cancer	C53
Nutritional problems	D50-D53, E40-E46, E50-E64, M833
Thyroid disorders	E00-E05,E890
Diabetes	E10-E14, E162
Alcohol-related	F10, I426, K290, K70
Illicit drug use	F11-F16, F18-F19, X42
Dehydration	E86,E870
Epilepsy	G40-G41, O15, R560, R568
Rheumatic fever/heart disease	I00-I09
Hypertensive disease	I10-I15, I674
Coronary heart disease	I20-I24 except I241, I46, I461, R96, R98
Stroke	I60-I62, I63, 164, I66, I678
Peripheral vascular disease	I65, I710, I1711, I1713, I1715, I1718, I74, I7021, I7022, II7023, I7024, E1052, E1452
Coronary procedures	3530400, 3530401, 3530500, 3530501, 3531000, 3531001, 3531002, 3531003, 3531004, 3531005, 3845619, 3849700, 3849701, 3849702, 3849703, 3849704, 3849705, 3849706, 3840707, 3850000, 3850001, 3850002, 3850003, 3850004, 3850300, 3850301, 3850302, 3850303, 3850304, 3850500, 3850700, 3850800, 3850900, 3863700, 9020100, 9020101, 9020102, 9020103
Cardiovascular disease overall	Coronary heart disease, stroke, peripheral vascular disease, coronary procedures
Congestive Heart Failure	I50, J81
CORD	J40-J44, J47
Asthma	J45-J46
Peptic ulcer disease	K25-K28
Ruptured appendix	K350, K351
Obstructed hernia	K400, K401, K403, K404, K410, K411, K413, K414, K420, K421, K430, K431, K440, K441, K450, K451, K460, K461
Dental conditions	K00-K06, K08
Failure to thrive	R62, R633, P923
Gangrene	R02

Complications of diabetes	ICD-10 Diagnosis codes
Renal complications of diabetes	1310000, 1310007, 1310008. 3650300, N18-N19
Diabetic neuropathy	E102, E112, E122, E132, E142
Cancer – registrations and mortality	**ICD-10 Diagnosis codes**
Oesophagus	C15
Stomach	C16
Colorectal	C18-C21
Liver, biliary tract	C22-C24
Pancreas	C25
Trachea, bronchus, lung	C33-C34
Melanoma and other malignant skin cancer	C43-C44
Breast	C50
Cervix	C53
Uterus	C54-C55
Ovary	C56
Prostate	C61
Testis	C62
Kidney	C64
Bladder	C67
Eye, brain, and other parts of central nervous system	C69-C72
Hodgkins disease	C81
Non-Hodgkin's lymphomas	C82-C85
Leukaemia	C91-C95
Myeloproliferative (dysplastic) syndromes	D45-D47
Lip and oral	C00-C14
Other and ill-defined digestive organs	C26
Nasal cavity and middle ear	C30
Accessory sinuses	C31
Larynx	C32
Thymus	C37
Heart, mediastinum and pleura	C38
Other and ill-defined sites in the respiratory system and intrathoracic organs	C39
Bone and articular cartilage of limbs	C40
Bone and articular cartilage of other an d unspecified sites	C41
Mesothelioma	C45
Kaposi sarcoma	C46
Peripheral nerves and autonomic nervous system	C47
Retroperitoneum and peritoneum	C48
Other connective and soft tissue	C49
Vulva	C51
Vagina	C52
Other and unspecified urinary organs	C63
Placenta	C58
Penis	C60
Other and unspecified male genital organs	C63
Renal pelvis	C65
Ureter	C66

Other and unspecified urinary organs	C68
Thyroid gland	C73
Adrenal gland	C74
Other endocrine glands and related structures	C75
Other and ill-defined sites	C76
Secondary and unspecified lymph nodes	C77
Secondary respiratory and digestive organs	C78
Secondary other sites	C79
Malignant neoplasm without specification of site	C80
Malignant immunoproliferative diseases	C88
Patient safety	**ICD-10 codes**
Falls in hospital	Ecode W00-W19 with ecode of Y9222
Secondary diagnosis of pressure sore (used as a proxy for pressure sores occurring in hospital)	Diagnosis codes L89, L97
Other Surgical Procedures	ICD-10 Procedure codes
Total hip joint replacement	4931800, 4931900, 4932400, 4932700, 4933000, 4933300, 4934500
Total knee joint replacement	4951800, 4951900, 4952100 - 3, 4952400 - 1, 4952700, 495300 - 1, 4953300, 4953400, 4955400
Cholecystectomy	3044300, 3044500, 3044600, 3044800, 3044900, 3045401, 3045500
Cataract extraction	4269800 - 5, 4270100 - 1, 4270200 - 211 4270300, 4270400 – 1, 4270700, 4278800 4279102
Prostatectomy	3683901 – 4, 3684200, 3700804, 3720000 – 6, 3720300 – 2, 3720700 – 1, 3720900
Hysterectomy	3565300 - 3, 3565700, 3566100, 3566400 - 1, 3566700- 1, 3567000, 3567300 -1, 3575000, 3575300-1, 3575600 - 2
Maternity	**ICD-10 Procedure and diagnosis codes**
Assisted delivery	9046800 – 4, 9046900, 9047001 - 4
Forceps delivery	9046800 – 4, 9046900, 9047001- 4
Caesarean sections	1652000 – 3
Ectopic pregnancy	O00
Pre-eclampsia	O14
Diabetes in pregnancy	E10-E14, O24 and delivery recorded

24.3 Appendix 3: Health Service Providers Interviewed and Semi-structured Interview Prompts

24.3.1 List of Interviewees

Name	Role	Organisation
Andrew McLachlan	Cardiology Nurse Practitioner	Cardiology services, CMDHB
Sue Lim	Service Manager	Asian Health Support Services, WDHB
Grace Ryu	Coordinator of Korean Services	Asian Health Support Services, WDHB
Dr Yogini Ratnasabapathy	Geriatrician	Health of Older People, WDHB
Sandy Latimer	Regional Project Leader	CALD Child Disability Service
Patrick Au	Asian Mental Health Coordinator	Mental Health Services, ADHB
Marie Shepherd	School Nurse	Mount Roskill Grammar School
Faieza Ali Khan	Diabetes Nurse Practitioner	Diabetes services, ADHB
Wendy Gadsden	Community Midwife	Obstetric services, ADHB
Venera Ukmata	Project Administrator	Interpreting services, ADHB
Dr Rajiv Sood	General Practitioner	Mount Roskill Medical Centre
Dr Weng Key Chan	General Practitioner	Otahuhu, Auckland

24.3.2 Semi-Structured Interview Prompts

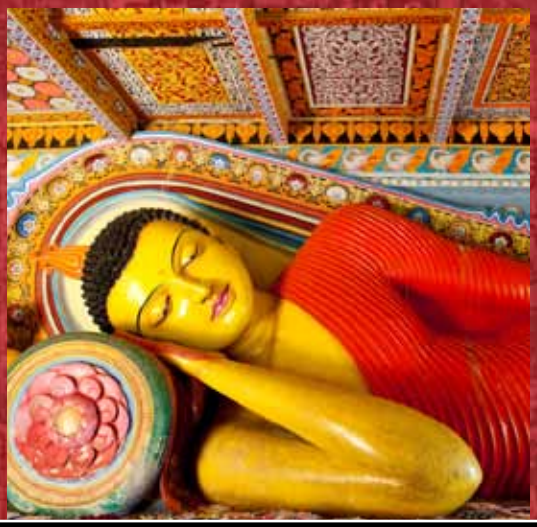
- What health services do you/your organisation provides for Asian peoples? Tell me about your experiences working with Asian patients and their families in your service.
- What are the main issues for Asian patients that you have encountered?
- Do Asian peoples need more support than other groups? In what way?
- Does your service work well for Asian patients and their families? Why?
- Do you have any examples of health services that are working well – why?
- Do you have any examples of health services that aren't working so well – why?
- Are there any gaps in health services for Asian peoples?
- What could be done to reduce these gaps?
- What are your thoughts on barriers to use of health services by Asian peoples?
- Do you have any thoughts on ways to improve the use of health services by Asian peoples?
- Any other comments?

24.4 Appendix 4: Methodology for the Virtual Diabetes Register constructed by the Ministry of Health

The Ministry of Health has established a national Virtual Diabetes Registry. Five nationally-collected health databases were used to derive the data presented in section 9.1 regarding the prevalence of diabetes in Auckland at 31 December 2010:

- Hospital admissions for diabetes from 1 July 1999 to 31 December 2010 (but excluding admissions for gestational diabetes)
- Outpatient attendances for diabetes or diabetes retinal screening between 1 July 2003 and 31 December 2010
- Insulin or oral hypoglycaemic agents dispensed on two or more occasions between 1 July 2009 and 31 December 2010.
- Four or more HbA1c tests between 1 July 2009 and 31 December 2010
- Enrolment with a PHO in Auckland.

Patients known to have died before 31 December 2010 were excluded from the final count.

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Publisher: Northern DHB Support Agency Ltd

PO Box 112147

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ISBN: ISBN 978-0-473-21083-0 (Paperback)

ISBN 978-0-473-21084-7 (PDF)