CMDHB: Health Service Needs and Labour Force Projections –

Implications for the Development of the **Pacific Peoples Workforce**

March 2006

COUNTIES MANUKAU DISTRICT HEALTH BOARD
A Community Partnership

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Preface

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Foreword

Improving the health of Pacific people is a strategic priority for Counties Manukau District Health Board (CMDHB) – this is clearly highlighted in our strategic documents, in particular the CMDHB District Strategic Plan and Tupuola Moui, CMDHB's Pacific Health & Disability Action Plan.

The Pacific Health Advisory Committee (PHAC) believes that providing a service that is responsive to the needs of our communities must be reflected in the workforce that we put in the front line to serve those populations – particularly Pacific people in our District.

CMDHB aims to grow the Pacific health workforce for two key reasons:

- The benefits for the health system in having an ethnically diverse workforce ensures we are more responsive to the needs of the communities that enter our front door; and
- Health is a significant industry employer in our local community. The socio-economic benefits of increasing employment and economic opportunities for our local community is one way we can impact on health inequalities.

I wish to acknowledge the work of the New Zealand Institute of Economic Research (NZIER) in completing this important analysis. We engaged in a Projections analysis for two key purposes:

- To inform our own planning at a local DHB level on what the size of our workforce shortage is likely to be and identify opportunities to increase this supply; and
- To inform how we work with our many partners – education institutions at both secondary and tertiary level, local community groups, health service providers and, of course, health professionals themselves.

The future sustainability of our health services relies on our people. Reducing the health inequalities borne by Pacific people also requires a responsive and ethnically diverse workforce. This report makes an important contribution in informing our workforce development planning, and is a companion document to a projection series looking at the Growing and Ageing Population and the Maori Workforce. It also accompanies our Community, NGO (Non-Government Organisation) and Primary Care Workforce Census.

We hope the report informs and helps facilitate a collaborative discussion and dialogue on how we – the collective health system – can work together to attract, recruit, retain, and grow the Pacific people we need to sustain our future health services.

Malo ma soifua

Fepulea'i Margie Apa
General Manager – Pacific Health
Counties Manukau District Health Board

Executive Summary

This report focuses on the future health service needs of Pacific peoples in Counties Manukau; and on the implications for the development of the Pacific peoples workforce. The key findings are as follows::

- Relative to the wider population locally, the Pacific peoples population is young and rapidly growing. The Counties Manukau population is itself young and rapidly growing, compared to New Zealand as a whole.
- Nonetheless, the Pacific peoples population is ageing.
- Pacific people's share of service needs (as measured by hospital discharges) is greater than their share of the population.
- The services they use more than the wider population (Women's Health and Kidz First) and their diagnoses (related to childbirth and medical conditions in infancy) largely reflect the youth of their population. However, they seem to be treated disproportionately for diseases of the respiratory system.
- Because their population is growing relatively rapidly, Pacific people's need for services will increase by around 75% by 2021, compared to about 50% in the wider population.
- Largely because of ageing, the increase in their need for services will be more rapid than the increase in their population.
- Their need for rehabilitation and intermediary care services will grow particularly rapidly, albeit from a low base. Their need for adult medical and surgical services will also grow rapidly.
- Pacific peoples are very under-represented in the hospital workforce. This under-representation is most severe amongst medical personnel, but it extends to every broad occupational category and every service area in the hospital workforce.
- In order for them to be no longer under-represented relative to their share of need or their share of the population, the number of Pacific people in the hospital workforce would have to increase by nearly four-fold by 2021.
- Even with less ambitious targets, it is difficult to imagine how CMDHB could find a sufficient number of Pacific peoples doctors by 2021. Finding enough Pacific peoples nurses and allied health personnel will be possible, but still difficult.
- CMDHB will need to take a range of actions, especially in the areas of staff recruitment and retention, if the Pacific peoples workforce is to be adequate in relation to Pacific people's needs.
- In developing its Pacific peoples workforce, CMDHB should work within a national framework for action.

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1. Introduction

1.1 Background

This report is one in set of four, prepared by the New Zealand Institute of Economic Research (NZIER) for Counties Manukau District Health Board (CMDHB). The aim of the reports collectively is to help CMDHB to consider the future health service needs of a growing, ethnically diverse and ageing population, and the consequent implications for hospital workforce development.

The set of reports is entitled **Counties Manukau Health Service Needs and Labour Force Projections.** The four reports within the set are:

1. Implications of a Growing and Ageing Population.
2. **Implications for the Development of the Pacific people's Workforce** (this report)**.**
3. Implications for the Development of the Maori Workforce.
4. Statistical Modelling Report.

The first three reports listed above are all relatively succinct, strategy-focused documents. The fourth report is a background document, which contains the statistical details that underpin the other reports.

The report on the **Implications of a Growing and Ageing Population** provides useful background to this report; and the key messages it contains about the Counties Manukau population as a whole apply equally to the Pacific peoples population in the area. In brief, it found that health service needs locally are likely to grow more rapidly than the population. It also found that, in the absence of concerted avoiding action, CMDHB will face labour shortages in the future, if it seeks to fully meet the local populations' need for services.

As the title suggests, the focus of this report is on the changing health service needs of Pacific peoples in Counties Manukau, and on what the changes imply for the development of the workforce. Although CMDHB provides and supports some services that are specifically targeted on Pacific peoples, there is no separate "Pacific peoples workforce" as such. However, a significant, but relatively small, proportion of CMDHB staff are Pacific peoples. It is also convenient to use the term for shorthand purposes.

In the context of this report it is important to note that a guiding principle for CMDHB is that patients should be able to access services that are delivered in a culturally appropriate manner. Taken to its logical conclusion, this means that the Pacific peoples workforce should be large

enough to serve all of the health service needs of the local Pacific peoples population. More realistically, however, it is recognised that not all Pacific people would necessarily elect to have provided by staff from their own ethnic group in all circumstances. It is also recognised that Pacific peoples are very under-represented in some sections of the workforce at present[1], and that this will take some time to rectify. More pragmatically, therefore, it is assumed that one third or one half of Pacific peoples patients would elect to be treated by Pacific peoples staff, given the choice. A key objective of this report is, therefore to consider what this means in terms of growing and developing the Pacific peoples workforce.

1.2 Approach and Methodology

Because there is no separate Pacific peoples workforce as such, our methodology for producing the estimates and projections included in this report is slightly different from the methodology used to produce the estimates and projections in the report on the **Implications of a Growing and Ageing Population**. In particular, the latter report took a formal labour market approach and examined the demand for, and supply of, labour. In this report we talk less formally about the employment of Pacific peoples by CMDHB and the Pacific people's working age population.

In brief, we took the following steps to project Pacific people's future hospital service needs and, subsequently, to highlight any workforce development issues that these service needs might imply:

1. Current service provision, as represented by the number of inpatient and outpatient discharges of Pacific peoples, is assumed to represent Pacific people's current service needs.
2. Using different Pacific peoples population growth scenarios, service needs are projected into the future by applying current age group- and gender-specific discharge rates to the different future populations implied by the growth scenarios.
3. Based on the projection in the report on the **Implications of a Growing and Ageing Population** that CMDHB's total demand for labour will increase from 3,514 FTEs in 2004 to 5,353 FTEs in 2021, under a medium population growth scenario, we ask a number of "what if?" questions. By answering these questions we can show what would happen to the level of Pacific peoples FTE employment, if certain hypothetical employment objectives were to be achieved.
4. The implications of the modelling outputs for CMDHB's workforce development strategy are then discussed.

We recognise that some of the assumptions underlying these steps might be challenged as being unrealistic. However, they are not rigid and they can be

[1] See section 5 of this report.

varied. The purposes of varying the assumptions are to enable alternative views of the hospital labour market to be considered, and to answer a number of "what if?" questions. A particular "what if" question that has already been alluded to above is: "By how much will the number Pacific people in the CMDHB hospital workforce have to grow in order that, by a given date, this ethnic group is no longer under-represented relative to its service needs or population shares?

1.3 Some words of caution

Like the others in the set, this report is about projecting the magnitude of staffing problems CMDHB could face, if it does not take concerted action to avoid them. It does not contain forecasts, as such. The purpose of presenting the projections is to provide a stimulus for thinking about what priorities and initiatives could be part of a strategy to ensure that CMDHB has the workforce that will be required to serve the growing and changing needs of its community. In discussing some of the options for action at the end of the report, we acknowledge that CMDHB has already taken some important steps in this direction.

It should be emphasised that the health service needs and labour force projections examined in this report refer to **hospital service needs and the hospital workforce**. CMDHB is currently enhancing its knowledge of the primary and community health service needs of its population. For example, CMDHB has recently undertaken large scale survey work to gain better understanding of the characteristics of the community workforce and its development needs.

Greater statistical detail about health service needs of Pacific peoples, and the Pacific peoples workforce, is included in the Statistical Modelling Report.

2. The Pacific peoples population

Two of the primary drivers of need for health services by any ethnic group in the population are the size and age structure of that group, and how these are changing over time. In this section we, therefore, consider the current and future Pacific peoples populations that require, and will require, hospital services from CMDHB.

The age structure and the overall size of any population (as well as the relative numbers of male and females in each age and ethnic group) are important because each sub-group in the population group has its own characteristic service needs. For example, the service needs of young, female Pacific peoples are quite different from the needs of middle-aged, male Asians. We know, from the CMDHB's Transition database, the current service needs of the various age/sex/ethnic sub-groups in the population. So, if we can project the size, structure and composition of the population into the future, we will be able to project likely future services needs in some detail.

2.1 The current population

The 2001 Census of Population is the most up-to-date official, non-estimated source of detailed breakdowns of specific populations by characteristics such as age, sex and ethnicity. This showed that, in 2001, the Counties Manukau area had the population summarised in Table 1. The table indicates that nearly 77,000 people, or one person in five, in Counties Manukau described themselves as belonging to the Pacific peoples ethnic group[2]. The comparison data for New Zealand as a whole emphasise the ethnic diversity of the area. In particular, Counties Manukau has a significantly larger proportion of Pacific peoples and a significantly smaller proportion of Europeans.

Table 1 Counties Manukau population by ethnic group, 2001

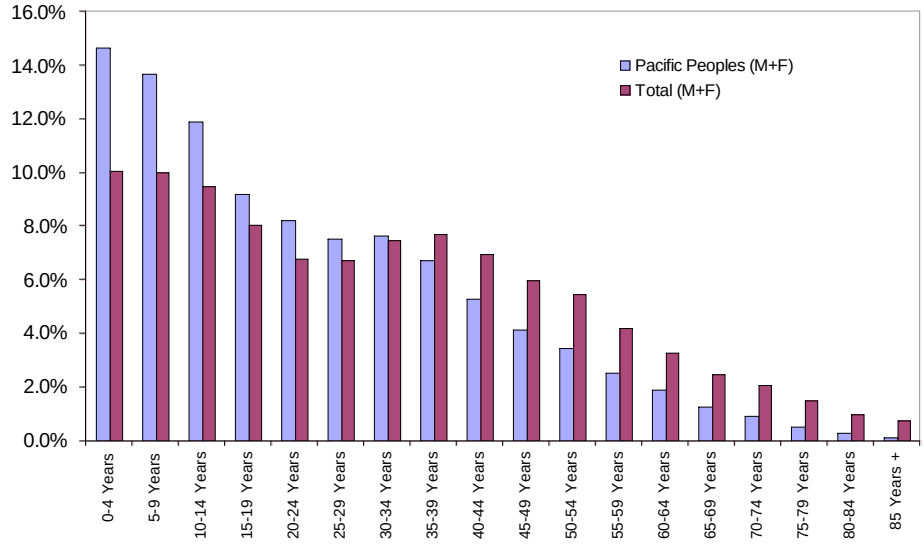
	Number	%	Corresponding proportion: all NZ (%)
European (incl. other ethnic groups n.e.c.)	211,743	54	71
Pacific peoples	76,899	20	7
M ori	61,386	16	15
Asian (including Indian)	45,189	11	7
Total	395,217	100	100

Source: Statistics New Zealand

[2] In fact, the census recorded information on individuals ethnicity in more detail. In this report the term Pacific peoples is based on Statistics New Zealand's classification. The seven largest Pacific peoples groups are Cook Island Maori, Fijian, Niuean, Samoan, Tokolauan, Tongan and Tuvaluan.

Figure 1 compares the age distribution of the Pacific peoples population in Counties Manukau to that of the wider Counties Manukau population. This shows that the Pacific Peoples population is relatively young. For all ethnic groups combined, those aged under 20 account for nearly 38% of the population in the Counties Manukau area, but the corresponding figure for Pacific peoples is almost 50%. The equivalent figure for the whole of New Zealand is just 30%. In other words, the Pacific peoples population in Counties Manukau is relatively young in an area which itself has a relatively young population. Conversely, the Pacific peoples and the wider Counties Manukau populations have a smaller proportion of people aged 35+ and a markedly smaller proportion of people aged 60+.

Figure 1 Counties Manukau population by age group – Pacific peoples compared to all ethnicities
Census 2001



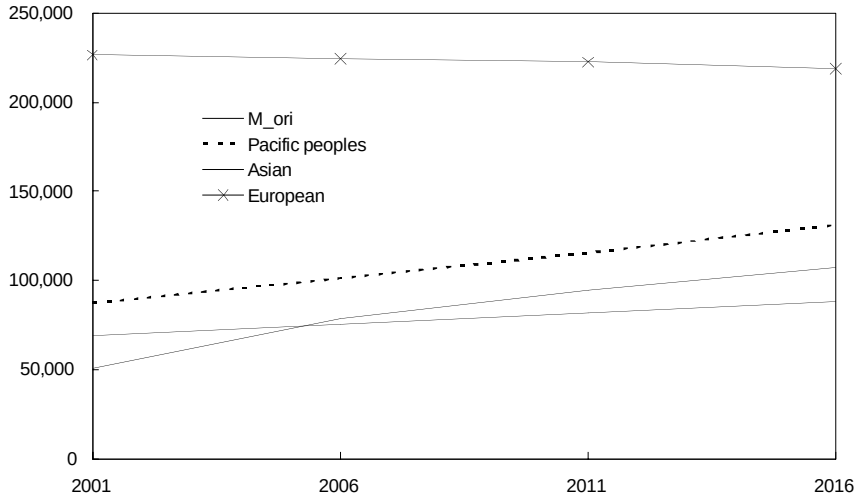
Source: Statistics New Zealand

2.2 The projected population

Figure 2 and Table 2 indicate how the numbers of Pacific peoples (and people in the other broad population groups) are projected by Statistics New Zealand to grow between 2001 and 2016. Both illustrate the fact that the Pacific peoples population is growing rapidly: that is to say, roughly as fast as the Asian population, and faster than the Maori population. By contrast, the European population is in gentle decline.

Figure 2 Counties Manukau population projections by ethnic group

Medium projections



Source: Statistics New Zealand

Table 2 also makes clear that, although the Pacific peoples population is relatively young, it is ageing nonetheless. The median age of the Pacific peoples population will remain low, but the proportions in both the 50-64 age group and the 65+age group are projected to increase. The figures in the table imply that the number of Pacific peoples aged 50+ will increase from 9,975 in 2001 to 21,402 in 2016 (an increase of 114%). The number of Pacific peoples aged 65+ is projected to increase from just 2,975 in 2001 to 7,090 in 2016 (an increase of 138%). We make particular reference here to people aged 50-64 because it is often noted that (in common with Maori) Pacific peoples tend to have patterns of disease and disability in advance of their chronological age, when compared to the population as a whole. In other words, it is said that the average 55 year old Pacific person (or Maori) has the health of the average 65 year old in the population as a whole.

Table 3 shows alternative Pacific peoples population growth projections from Statistics New Zealand. The low growth scenario implies an annual average rate of increase of around 2%. The high growth scenario implies an annual average rate of increase of around 4%. Under the medium growth scenario, the wider population is projected to grow by 25% overall: i.e. at half the rate of increase in the Pacific peoples population.

Table 2 Counties Manukau population projections by ethnicity and broad age group

Medium projection – 2001 and 2016.

	Ethnic group population	Absolute change	Average annual % change	Resident age group distribution (%)					Median age (years)
				0-14	15-29	30-49	50-64	65+	
	European								
2001	226,500	-	-	23.2	18.4	29.5	16.9	12.0	35.7
2016	218,700	-7,800	-0.2	18.1	16.9	24.6	20.9	19.6	43.1
	Pacific peoples								
2001	87,500	-	-	**39.4**	**25.1**	**24.0**	**8.0**	**3.4**	20.9
2016	131,300	43,800	3.0	**34.0**	**27.2**	**22.5**	**10.9**	**5.4**	23.1
	Maori								
2001	69,200	-	-	38.5	25.8	25.3	8.0	2.4	21.4
2016	87,800	18,600	1.5	33.4	26.4	23.2	12.2	4.8	23.7
	Asian								
2001	51,000	-	-	25.1	25.7	32.3	12.3	4.6	29.4
2016	107,000	56,000	5.0	21.8	24.1	28.5	17.9	7.8	33.2

Source: Statistics New Zealand

Table 3 Pacific peoples population projections

	Statistics NZ population scenario		
	Low growth	**Medium growth**	**High growth**
2001	87,500	87,500	87,500
2006	98,800	101,500	104,200
2011	109,900	115,800	121,600
2016	121,900	131,300	141,100
% change 2001-2016:			
Pacific peoples	**39**	**50**	**61**
All ethnic groups	13	25	38

Source: Statistics New Zealand

3. Current hospital service needs

In this section we describe and examine the current provision of hospital services to Pacific peoples. For modelling purposes, it is necessary to assume that the current provision of services is the same as the current need for services. They might, in reality, be different, but it would be difficult to measure "real" need because some needs are likely to be suppressed or disguised.

3.1 Inpatients

Table 4 indicates that the proportion of CMDHB inpatient discharges accounted for by Pacific peoples (25%) is considerably greater than their population share (20%).

Table 4 CMDHB inpatient discharges by ethnic group
Year ended 28/02/05

Ethnic group	Number of inpatient discharges	Proportion of total inpatient discharges, %	Proportion of local population, %
European (including other ethnic groups n.e.c.)	43,284	47	54
Pacific Islander	23,281	25	20
Maori	16,599	18	16
Asian (including Indian)	8,136	9	11
Unknown	1,235	1	-
Total	92,535	100	100

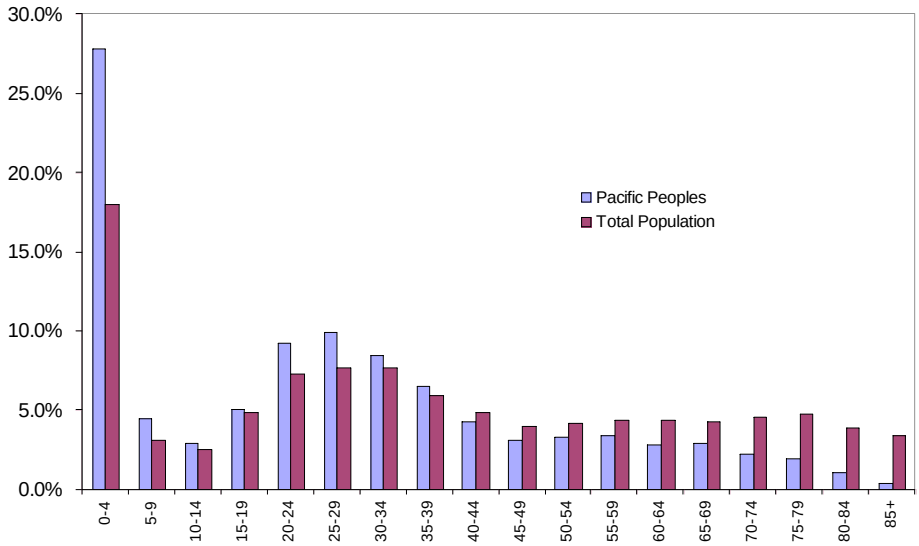
Source: CMDHB – Transition database

Figure 3 indicates that, compared to the pattern in the wider population, the pattern of inpatient discharges amongst Pacific peoples is skewed towards the younger age groups. However, this is not surprising, given that the Pacific peoples population is relatively young.

More interestingly, the age distribution of Pacific peoples inpatient discharges in Figure 3 can also be compared with the age distribution of the Pacific peoples population shown in Figure 1. This comparison reveals that the pattern of inpatient discharges amongst Pacific peoples is very highly skewed towards babies and infants (i.e. aged 0-4 years). Table 5 also hints that inpatient discharges amongst Pacific peoples are explained to a considerable extent by childbirth and medical conditions in infancy. This particular table shows that nearly two-thirds of Pacific peoples inpatient discharges (63%) were from just two services: Kidz First and Women's Health. In the wider Counties Manukau population, the equivalent

proportion was considerably less than half (44%). Conversely, relative to the wider population, smaller proportions of Pacific peoples inpatient discharges were from the Adult Surgical and Adult Medical services.

Figure 3 Inpatient discharges by age group
Pacific peoples vs. total population – year ended 28/02/05



Source: CMDHB – Transition database

Table 5 Breakdown of inpatient discharges by Service area, %

	Pacific peoples	All ethnic groups
Kidz First	24	15
Adult Medical	19	26
Mental Health	1	1
Rehab. & intermediary care	1	2
Adult Surgical	16	27
Women's Health	39	29
All inpatient services	100	100

Source: CMDHB Transition database

3.2 Outpatients

Table 6 indicates that (in common with other ethnic groups) Pacific people's share of outpatient discharges is more-or-less the same as their population share. However, Figure 4 reveals that the age distribution of Pacific peoples outpatient discharges is different from the age distribution of discharges in the population as a whole. The peak rate of outpatient discharges occurs in a slightly younger age group amongst Pacific peoples (i.e. 55-59 years old)

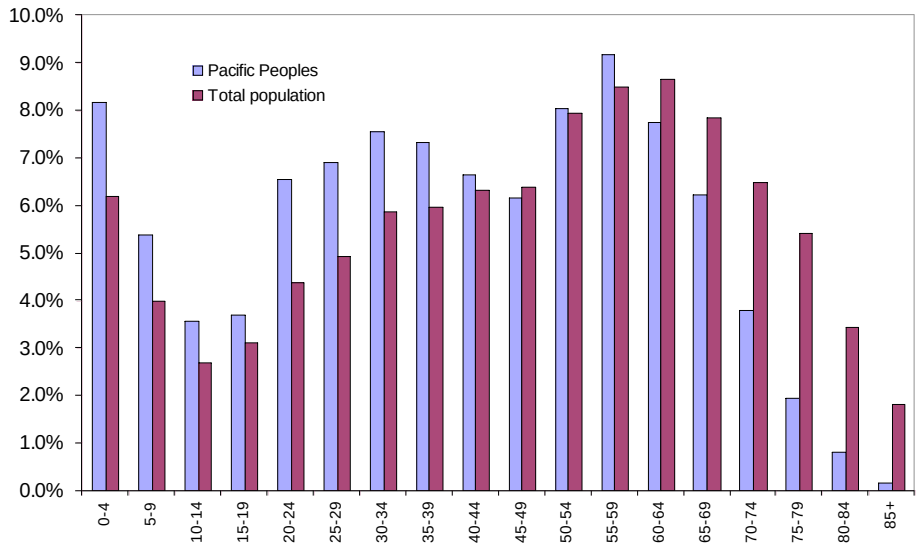
than it does amongst the population as a whole (i.e. 60-64 years old)[3]. Figure 4 also shows that the age distribution of outpatient discharges amongst Pacific peoples is very different from the age distribution of their inpatient discharges shown in Figure 3. Whereas inpatient discharges amongst Pacific peoples are skewed towards babies and infants, outpatient discharges are skewed towards older adults.

Table 6 CMDHB outpatient discharges by ethnic group
Year ended 28/02/05

Ethnic group	Number of inpatient discharges	Proportion of total outpatient discharges, %	Proportion of local population, %
European (including other ethnic groups n.e.c.)	134,410	53	54
Pacific Islander	53,940	21	20
Maori	39,039	15	16
Asian (including Indian)	25,178	10	11
Total	252,567	100	100

Source:CMDHB – Transition database

Figure 4 Outpatients discharges by age group
Pacific Peoples vs. total population – year ended 28/02/05



Source: CMDHB – Transition database

[3] This lends some weight to the proposition, expressed in section 2, that Pacific peoples tend to have patterns of disease in advance of their chronological age, when compared to the population as a whole.

Table 7 indicates that, compared to the distribution of Pacific peoples inpatient discharges by service area, the distribution of their outpatient discharges by service area is more similar to the pattern of discharges in the wider population. However, the proportions of Pacific peoples outpatients discharges is relatively large in the Kidz First and Women's Health service areas, and correspondingly small in the Adult Surgical service area.

Table 7 Breakdown of outpatient discharges by Service area, %

	Pacific Peoples	All ethnic groups
Kidz First	13	9
Adult Medical	41	41
Rehab. & intermediary care	0	1
Adult Surgical	29	37
Women's Health	18	12
All outpatient services	100	100

Source: CMDHB Transition database

3.3 Analysis by Major Diagnostic Category

Table 8 shows inpatient discharges broken down by the top 10 Major Diagnostic Classes for Pacific peoples compared to the wider population. The MDCs in the top 10 are no different for Pacific peoples than they are for the wider population, but the rankings are different. In particular, inpatient discharges related to diseases of the respiratory system are much more highly ranked amongst Pacific peoples (i.e. 2nd) than amongst the wider population (i.e. 6th).

The table also indicates that a relatively concentrated pattern of discharges by MDC amongst Pacific peoples, compared to the wider population. It also implies that Pacific peoples account for a large share of the top ranked MDCs. In fact, although their population share is 20%, they account for 34% of all Counties Manukau inpatient discharges related to pregnancy and childbirth, 37% of discharges related to respiratory disease and 35% of discharges related to perinatal conditions.

It should be noted that CMDHB's data on discharges categorised by MDC apply only to inpatients and not to outpatients. This is unfortunate, given that, both amongst Pacific peoples and the wider population, there are more than twice as many outpatient discharges as there are inpatient discharges[4].

[4] Overall, however, CMDHB has better patient and workforce data than most other DHBs.

Table 8 Inpatient discharges by ethnicity – Top 10 MDCs

Year ended 28/02/05

	Pacific peoples		All ethnic groups	
MDC	Number	% of total	Number	% of total
PREGNANCY & CHILDBIRTH	3,898	16.7	11,607	12.5
DISEASE /RESPIRATRY SY	2,707	11.6	7,303	7.9
NEWBORN DUE TO PERINATAL	2,682	11.5	7,738	8.4
DISEASE /MUSC/SKLTL SYST	2,004	8.6	10,661	11.5
DISEASE /DIGESTIVE SYST	1,590	6.8	8,565	9.3
DISEASE /EAR NOSE &THROAT	1,324	5.7	4,820	5.2
DISEASE /CIRCULATORY SYST	1,254	5.3	7,539	8.1
DISEASE /SKIN & SUBC TISS	995	4.3	5,753	6.2
DISEASE /NERVOUS SYSTEM	958	4.1	4,490	4.9
INJURY,POISON &TOXIC DRUG	730	3.1	3,798	4.1
Top 10 MDCs as % of all inpatient discharges		77.9		78.1
Top 5 MDCs as % of all inpatient discharges		55.3		49.8
Top 3 MDCs as % of all inpatient discharges		39.9		33.3

Source: CMDHB – Transition database

4. Projected need for hospital services by Pacific peoples

4.1 Introduction

We now turn our attention to projections of future need for hospital services by Pacific peoples. As noted earlier, the projections, or need scenarios, are produced by applying current sex and age group specific hospital discharge rates to 3 Pacific peoples population projections produced by Statistics New Zealand:

1. **Lower bound scenario –** Low population growth (including an allowance for the Flatbush development), with current sex and age group-specific discharge rates assumed to continue.
2. **Middle ground scenario –** Medium population growth (including an allowance for the Flatbush development), with current sex and age group-specific discharge rates assumed to continue.
3. **Higher bound scenario –** High population growth (including an allowance for the Flatbush development), with current sex and age group-specific discharge rates assumed to continue.

The scenarios are expressed in terms of need broken down by service area. An analysis of Pacific people's need broken down by MDC can be found in the Statistical Modelling Report.

4.2 Analysis by service area

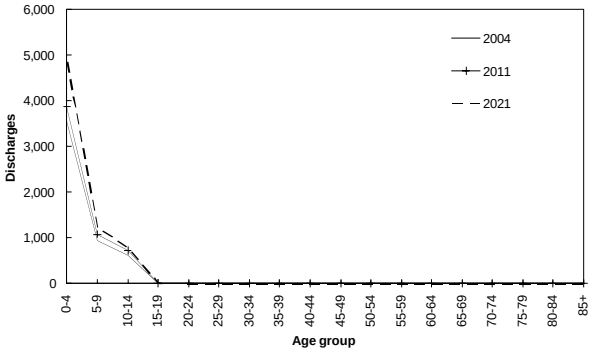
Using the approach outlined above, we are able to project Pacific people's need by service area. Figure 5 and Figure 6 indicate, based on the middle ground scenario, how need for each of the service areas is assumed to change over time. In each chart, a separate line for 2004, 2011 and 2021 is shown to indicate how the pattern and absolute level of need broken down by age group changes over time for each service area.

The area under each line represents the volume need for the services shown, where the volume of need is measured by the number of discharges. In general, the age-related peaks in need that exist in 2004 (the base year) are typically accentuated by the population growth and ageing over time. This is particularly the case for service areas where a large proportion of the need relates to those in older age groups (i.e. 50+). Bearing in mind that the vertical scale for each service area is different, the projected increases in need for inpatient and outpatient Medical services and inpatient and outpatient Women's Health look especially large. The projected increases in need for inpatient Rehabilitation and intermediary care services are also large, but it will be noted that they are from a low base.

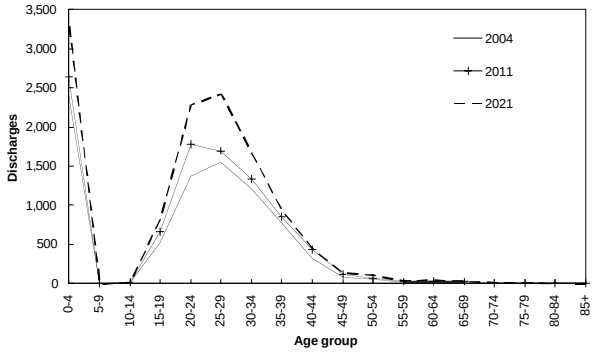
Figure 5 Projections of need (number of inpatient discharges) by service area – middle ground scenario for Pacific peoples

Medium population scenario (Flatbush included) – current incidence.

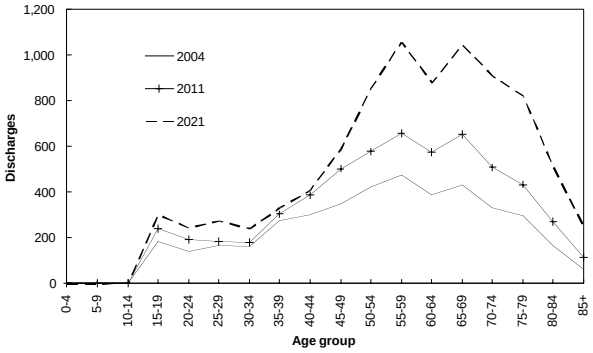
Inpatients – Kidz first



Inpatients – Women's health



Inpatients – Medical services



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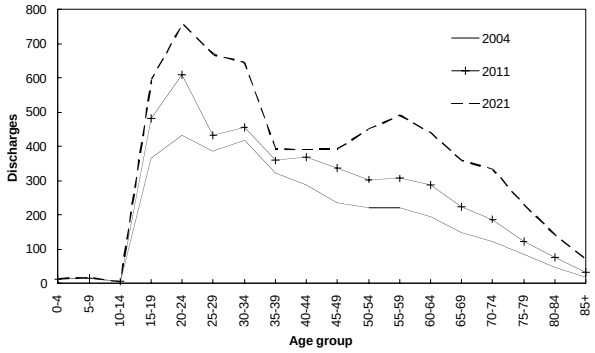
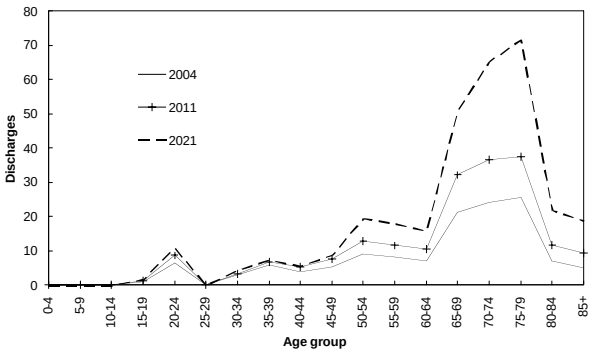
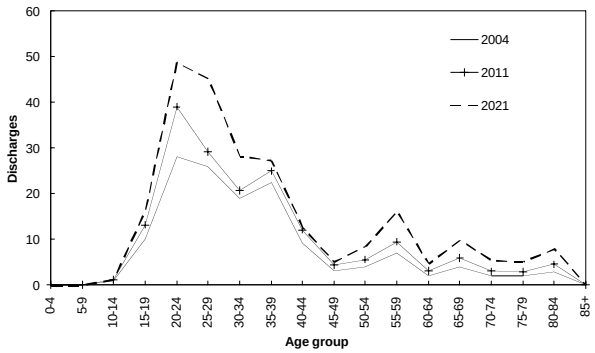


Inpatients – Rehab/intermediary care



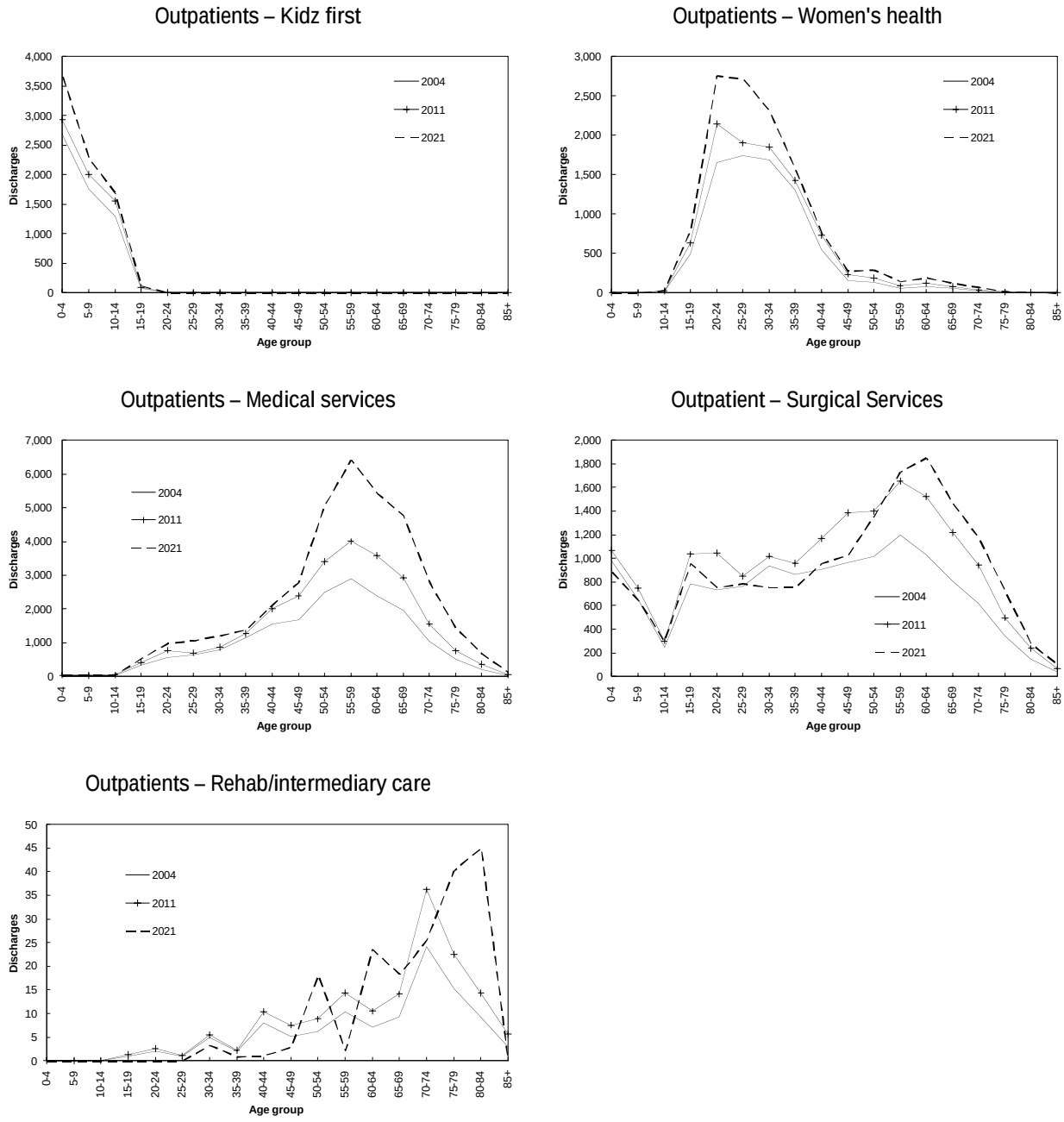
Inpatients – Mental Health



Source: Statistics New Zealand, CMDHB, NZIER

Figure 6 Projections of need (number of outpatient discharges) by service area – middle ground scenario for Pacific Peoples

Medium population scenario (Flatbush included) – current incidence.



Source: Statistics New Zealand, CMDHB, NZIER

Table 9 converts the information underlying Figure 5 and Figure 6 into indices for different service areas under the three scenarios. The table implies that, taking all service areas together, Pacific people's need will increase by between 63% and 84% by 2021. By comparison, need in the wider population will increase by between 39% and 62%.

The table also confirms that the growth in need will vary markedly by service area. For example, under the middle ground scenario, the need for

Rehabilitation and intermediary care services by Pacific peoples will significantly more than double, whereas their need for Kidz First services will grow by just over a third. Under this scenario, Pacific people's need for Adult acute medical services will also double.

Table 9 Indices (2004=100) of need in 2021 by service area (inpatients and outpatients combined)
(Flatbush included).

	Lower bound scenario		Middle ground scenario		Upper bound scenario	
	Pacific Peoples	All ethnic groups	Pacific Peoples	All ethnic groups	Pacific Peoples	All ethnic groups
Adult acute medicine	194	160	203	170	212	180
Rehab / Intermediary care	227	183	238	194	247	205
Kidz first	120	96	134	111	148	127
Mental health	160	125	170	136	181	147
Surgical services	174	142	184	152	194	163
Women's health	138	113	149	126	161	139
TOTAL	163	139	174	150	184	162

Source: Statistics New Zealand, CMDHB, NZIER

It is also worth noting that the 74% increase in Pacific people's need for services overall under the middle ground scenario compares with a 53% increase in their population under the same scenario. In other words, Pacific people's need for services will grow nearly half as rapidly again as the size of their population; and this is attributable to the ageing of the population. However, as was shown in the report on the Growing and Ageing Population, overall need by people of all ethnicities combined is projected to grow by almost double the rate of increase in the size of the population. The difference here is explained by the fact that the wider population is projected to age more than the Pacific peoples population.

4.3 Change in Pacific people's share of total need

Table 4 and Table 6 in the previous section implied that in 2004 Pacific peoples accounted for 22% of all inpatient and outpatient discharges. In combination with these tables, Table 9 implies that Pacific people's share of all discharges will rise to 26% by 2021 under the middle ground scenario.

5. Employment of Pacific peoples by CMDHB

In this section we initially examine the current pattern of employment of Pacific peoples by CMDHB; and we compare this with the pattern of employment in the wider hospital workforce. We then consider how the level of Pacific people's employment in the hospital workforce would need to change, if certain hypothesised employment-related objectives were to be achieved.

5.1 Current employment of Pacific peoples

At the time of the CMDHB hospital workforce census there were 3,514 FTE staff, although the "head count" number of employees was 5,236.

Table 10 shows that just 9% of the staff who disclosed their ethnicity in the census were Pacific peoples. The table also shows the ethnic breakdown of the local population. However, we emphasise that the percentages in the final two columns of the table are not strictly comparable because 'other' ethnicities were identified separately in the hospital workforce census, but included with Europeans in the summary 2001 census tables. It is also possible that 'other' tended to mean one thing in the 2001 census (e.g. African or American), but another in the hospital workforce census (e.g. mixed ethnicities). Nonetheless, the table does seem to suggest that Pacific peoples (as well as Maori) are significantly under-represented in the hospital workforce, relative to their share of the local population.

Table 10 CMDHB full-time equivalent staff by ethnic group

Ethnic group	Number	Proportion of those who disclosed an ethnicity, % (Hospital workforce census)	Proportion of local population, % (2001 Census)
Not disclosed	749	n/a	-
NZ European	1,454	53	54
Asian	501	18	11
Other	372	13	-
Pacific	249	9	20
M ori	190	7	16
Total	3,514	100	100

Note: The proportions in the last two columns in the table are not strictly comparable – see text

Source: CMDHB – survey of CMDHB workforce, Statistics New Zealand

Table 11 indicates the occupational distribution of the 3,514 FTE staff and, again, it compares Pacific people with the wider population. Within the Pacific peoples workforce, the proportions of staff who are nurses and who are allied health professionals are more-or-less the same as in the wider population. However, the proportion of medical personnel in the Pacific peoples workforce is very small. Conversely, the proportion of Pacific peoples employed as management and administrative staff is relatively large. It should be noted that the table assumes that staff who did not disclose their ethnicity had the same occupational distribution as those who did.

Table 11 Occupational breakdown of FTE staff *(excludes staff who did not disclose their ethnicity)*

Occupational group	Proportion, % Pacific Peoples	Proportion, % all ethnic groups
Medical Personnel	3	16
Nursing personnel	52	48
Allied health personnel	13	14
Support personnel	5	2
Management/admin	27	19
Total	100	100

Source: CMDHB – survey of CMDHB workforce

Similarly, Table 12 assumes that the occupation by service area breakdown of staff who did not disclose an ethnicity was the same as the breakdown of

those who did. Hence, the number of Pacific peoples FTEs is shown in this table as 316 (rather than 249, as in Table 10).

The table indicates that nurses accounted for the majority of Pacific peoples staff in all the service areas, apart from Mental health and Support services. It also shows that Pacific peoples were much more likely to be employed in the Support services than in any other service area.

More importantly, by showing the numbers of staff from all ethnic groups in each occupational group or service area, the table also implies that Pacific peoples are under-represented, relative to their 20% share of the local population, in virtually every section of the workforce. In terms of occupational group, the proportion of staff who are Pacific peoples ranges from just 1.4%, in the case of Medical personnel, to 19.8%, in the case of Support personnel. In terms of service area, the proportion of staff who are Pacific peoples ranges from 7.2%, in the case of Intermediate care / rehabilitation, to 12.9%, in the case of Women's health.

Table 12 Estimated breakdown of Pacific Peoples full-time equivalent staff by service area and occupational group

	Medical Personnel	Nursing personnel	Allied health personnel	Support personnel	Management / admin	Total: Pacific peoples	Total: All ethnic groups
Medical services	5	44	4	1	4	56	729
Intermediate care / rehabilitation	0	16	1	0	2	19	263
Kidz first	0	24	3	0	5	32	264
Mental health	1	15	10	0	7	33	417
Surgical services	1	35	6	0	8	50	689
Women's health	1	26	0	0	4	31	241
Supporting services	0	7	16	17	55	95	911
Total: Pacific peoples	8	166	41	17	84	316	
Total: All ethnic groups	576	1,686	502	86	664		3,514

Source: CMDHB – survey of CMDHB workforce

5.2 Hypothetical employment outcomes for Pacific peoples

In the report on the Growing and Ageing Population, we projected that, under the middle ground scenario, the overall demand for labour (i.e. total employment) by CMDHB would grow, in line with the population's service need, to 5,353 FTEs. Here we ask a number of "what if?" questions related to the employment of Pacific peoples, based on this projection.

The questions we can ask and answer are "by how much would employment of Pacific peoples in CMDHB's hospital workforce increase between 2004 and 2021 if …

- …. their share of total hospital employment remains at the 2004 level?" (i.e. 9% of total FTEs)
- …. their FTE numbers increase as rapidly as their population?" (i.e. by 53% by 2021)
- …. their FTE numbers increase as rapidly as their working age population?" (i.e. by 64% by 2021)
- …. their FTE numbers increase as fast as their need for services?" (i.e. by 74% by 2021)
- …. their share of employment increases to become the same as their population share?" (i.e. 25% in 2021)
- …. their share of employment increases to become the same as their share of service need?" (i.e. 26% of all discharges in 2021)

Table 13 shows the range of hypothetical employment outcomes for Pacific peoples based on the "what if?" questions above. Given that the Pacific peoples working age population in Counties Manukau is projected to increase by nearly two-thirds between 2004 and 2021, the first four hypothetical outcomes appear to be achievable. However, the last two both imply a more-than-fourfold increase in the numbers of Pacific peoples employed; and it is difficult to imagine that these magnitudes of increase could be achieved, even over a 17 year time period.

The base level of Pacific peoples employment is simply too low to make the last two hypothesised outcomes in Table 13 look credible. Hence, the more pragmatic assumption expressed in section 1, i.e. that the Pacific peoples workforce should be large enough to meet between a third and a half of Pacific people's service needs. This implies that the Pacific peoples workforce would need to grow to between 464 FTEs (an increase of 47%, compared to the 2004 level of 316) and 696 FTEs (an increase of 120%) by 2021.

Table 13 Hypothetical employment outcomes for Pacific peoples

By how much would employment of Pacific peoples in CMDHB's hospital workforce increase between 2004 and 2021 if …

Hypothesis:	Base level of Pacific peoples FTE employment, 2004	Implied level of Pacific peoples FTE employment, 2021	Implied % change 2004-2021
…their share of employment remains at the 2004 level?"	316	482	53
…. their FTE numbers increase as rapidly as their population?"	316	483	56
…. their FTE numbers increase as rapidly as their working age population?"	316	518	64
…. their FTE numbers increase as fast as their need for services?"	316	550	74
…. their share of employment increases to become the same as their population share?"	316	1,338	323
…. their share of employment increases to become the same as their share of service need?"	316	1,392	341

Source: NZIER

6. The size and nature of the challenge

Expressed in terms of the pragmatic assumption (i.e. that the Pacific peoples workforce should be large enough to meet between a third and a half of Pacific people's service needs) a 47%-120% increase in the size of the Pacific peoples workforce by 2021 does not look too formidable. However, it is necessary to look more closely at what this implies. In particular, we need to ask the question: "Will it be possible to reach a situation where there are sufficient Pacific peoples staff in each occupational category (i.e. medical personnel, nurses, allied health personnel, etc.) to treat between 33% and 50% of Pacific peoples patients by 2021?" Clearly, a workforce can only be effective if it is reasonably balanced.

The answer is: "Probably not", and the reasoning behind this answer is as follows:

- Our report on the implications of a growing and ageing population indicated that the hospital workforce would need to grow to 875 medical personnel, 2575 nurses and 764 allied health professionals by 2021.
- Based on a 26% share of need, having enough Pacific peoples **medical personnel** to serve 100% of Pacific people's needs implies that CMDHB will require 228 doctors who are Pacific people by 2021 (compared to just 8 in 2004). Having enough to serve 33% of Pacific people's needs implies that CMDHB will require 75 doctors who are Pacific people (i.e. an increase of 838%, compared to the 2004 baseline). Having enough to serve 50% of Pacific people's needs implies that CMDHB will require 114 doctors who are Pacific people (i.e. an increase of 1325%).
- Based on the same overall share of need, having enough Pacific peoples **nurses** to serve 100% of Pacific people's needs implies that CMDHB will require 670 nurses who are Pacific people by 2021 (compared to just 166 in 2004). Having enough to serve 33% of Pacific people's needs implies that CMDHB will require 223 nurses who are Pacific people (i.e. an increase of 34%, compared to the 2004 baseline). Having enough to serve 50% of Pacific people's needs implies that CMDHB will require 335 nurses who are Pacific people (i.e. an increase of 102%).
- Similarly, having enough Pacific peoples **allied health personnel** to serve 100% of Pacific people's needs implies that CMDHB will require 199 AHPs who are Pacific people by 2021 (compared to just 41 in 2004). Having enough to serve 33% of Pacific people's needs implies that CMDHB will require 66 AHPs who are Pacific people (i.e. an increase of 62%, compared to the 2004 baseline). Having enough to serve 50% of Pacific people's needs implies that CMDHB will require 100 AHPs who are Pacific people (i.e. an increase of 144%).

It is possible to imagine a situation where there are enough Pacific peoples nurses and AHPs to serve the needs of the Pacific peoples population., but having enough Pacific peoples doctors to serve even 33% of needs of the

Pacific peoples population seems unimaginable, especially given the time it takes to train and develop doctors so that they can fill senior roles.

7. The implications for CMDHB

It is clear that CMDHB will need to implement a range of actions in the area of Pacific peoples workforce development, if it is to live up to the guiding principle discussed in section 1.1 of this report.

Finding the necessary number of doctors will be the greatest problem. But it is also important not to overlook the challenges that will have to be addressed, if CMDHB is to have sufficient numbers of Pacific peoples nurses and AHPs to serve Pacific peoples needs appropriately. Although the task of finding sufficient numbers of Pacific peoples nurses and AHPs does not seem impossible, it will be difficult nonetheless.

Equally, it is important, when considering solutions, to bear in mind that the problems CMDHB faces, are to a large extent, acute local manifestations of wider national problems. This implies that CMDHB ought to seek local solutions (and, at the same time, contribute towards national solutions) by working in ways that are consistent with national policy frameworks.

7.1 Key conclusions from the report on the implications of a growing and ageing population

In discussing the implications for CMDHB, the report on the implications of a growing and ageing population considered the scope for avoiding labour shortages by means of both demand-side and supply-side actions. It concluded that future increases in the demand for labour could potentially be constrained by reducing the local population's need for services and /or by increasing labour productivity. However, other CMDHB strategic priorities (e.g. increasing quality of, and access to, services) could actually have the effect of magnifying increases in labour demand. Accordingly action on the supply-side, combining efforts to improve the recruitment and the retention of hospital staff, were thought to be more likely to be effective in minimising or avoiding labour shortages.

We believe that this logic applies equally to Pacific people's service needs and CMDHB's Pacific peoples workforce. Pacific people are known to have worse access to health services than the population as a whole. If efforts to improve access are successful, they are likely to increase the demand for labour. Efforts to improve the quality of services to Pacific people, and steps to introduce new models of care, could have the same effect. Reducing the demand for health service workers of Pacific peoples origin is not a realistic prospect. The emphasis, therefore, needs to be on increasing the supply, through better recruitment, development and retention of Pacific peoples staff.

7.2 Action by CMDHB within a national framework

The message that action to ensure that there is a Pacific peoples workforce adequate to meet the needs of the Pacific peoples population ought to emphasise the supply side (especially recruitment and retention) resonates strongly with the Ministry of Health's **Pacific Health and Disability Workforce Development Plan**, published in November 2004.

CMDHB will undoubtedly be familiar with the Plan, but we note that it proposes 4 goals and 14 associated objectives for Pacific workforce development. There are actions associated with each of the goals and objectives; and action takers (including DHBs), timeframes and resources (e.g. from the Pacific Provider development Fund) are identified in relation to each action. We also note that some of the actions proposed in the Plan have already been progressed.

Naturally, CMDHB will wish to find Pacific workforce development solutions that align closely with local conditions. But we believe that any CMDHB Pacific Workforce Development Plan should dovetail with, rather than duplicate or conflict with, the national framework for action. At minimum, this will help to ensure that CMDHB actions attract a share of national resources. It will also help to ensure that CMDHB is not simply engaged in zero-sum games with other DHBs in areas such as recruitment.