Prepared by:

DISTRICT HEALTH BOARD EMPLOYED WORKFORCE QUARTERLY REPORT

1 JULY TO 30 SEPTEMBER 2020

Health Workforce Information

The Health Workforce Information Programme (HWIP) is a well-established programme within Technical Advisory Services (TAS) and supports the District Health Boards (DHBs) through providing base information on DHB employee demographics, competencies and describing the current composition of the DHB workforce. Regular reports are based on a quarterly collection of data from the DHBs. DHB employee data has been collected on a quarterly basis since mid-2006 with a continued focus on improving data quality.

Purpose of the Report

This report covers all DHB employees for the period 1 July 2020 to 30 September 2020 and is a snapshot in time at 30 September 2020. The report provides information on the general make up and characteristics of the DHB health and disability workforce to help inform further data analysis and workforce planning. The format of the report is to provide tables and graphs on the demographics of the DHB workforce aligned to the seven occupational groupings. These groupings are:

- Senior Medical Officer (SMO)
- Resident Medical Officer (RMO)
- Nursing
- Midwifery
- Allied & scientific (the amalgamation of Allied Health and Technical and Scientific)
- Care and support
- Corporate and other

Data Extraction

Important notes about the data extraction:

- The data extract used for this report covers the period July 2020 to September 2020 inclusive and is a snapshot taken by the DHBs on 30 September 2020.

- The data quality continues to improve through working closely with the DHBs to help manage and improve the data submitted.

Disclaimer

While due care has been applied in the processing, analysing and extraction of data and information to ensure the accuracy of the work, TAS provides no warranty as to the accuracy, authenticity or validity of the data and information and/or that it is supplied free from error. TAS is not liable whatsoever, including for negligence or defamation, for all and any damages or liability in respect of or arising out of use, reliance or otherwise for this work, whether direct or indirect, including the provision of any incorrect, inaccurate or incomplete information.

Contact: HWIP@tas.health.nz
Data source: DHB Workforce Information, held by TAS.

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OVERVIEW

DHB WORKFORCE AT A GLANCE

For data to 30 September 2020, only those employed with contracted hours greater than zero are included in the analysis except for the tables and charts that explicitly report on 'Other' employees on page 5. 'Other' includes those on maternity / parental leave, and those who have not been reported with an employment status code.

Total employees 79,292*** 62,078 female > 17,200 male	66,906 FTE 51,159 FTE* females 15,744 FTE* males	Largest occupation group: Nurses – 30,355 Smallest occupation group: Midwives – 1,538
DHB employee average age 45.0 years 45.1 years for females 44.8 years for males	Oldest male occupation group: SMO (mean age 51.4 years) Youngest male occupation group: RMO (mean age 31.2 years)	Oldest female occupation groups: Corporate and other (mean age 50.0 years) Youngest female occupation group: RMO (mean age 30.9 years)
Mean FTE rate 0.84 Mean FTE rate for females 0.82 Mean FTE rate for males 0.91	Longest Length of Service occupation group SMO (mean 10.1 years) Shortest Length of Service occupation group RMO (mean 1.5 years)	Employee reported ethnicities: Other** – 65.9% Asian – 21.3% Māori – 8.3% Pacific – 4.5%

*   Contracted FTE (using a 2086 hour annual contract):
N.B. local (DHB and / or occupation) interpretations of a 'full time equivalent' can vary. For example; a sonographer may be classed as 1.0 full time employee in one DHB where they are contracted to work 35 hours per week, whereas another sonographer in a different DHB may be classed as 1.0 full time employee where they are contracted to work 40 hours per week. The Contracted FTE definition used here allows a comparison to be made across DHBs and occupations through a universal standard.

**   To allow direct comparisons with reported ethnicity data from Statistics New Zealand, we have amalgamated ethnicities not associated with Asian, Māori or Pacific into the group 'Other'.

***   There were fewer than five employees reported as gender diverse.

DISTRIBUTION OF EMPLOYEES

This chart shows the number of employees within each DHB who are classed as either Employees (contracted hours greater than zero) or 'Other' (all others including those on maternity / parental leave, and those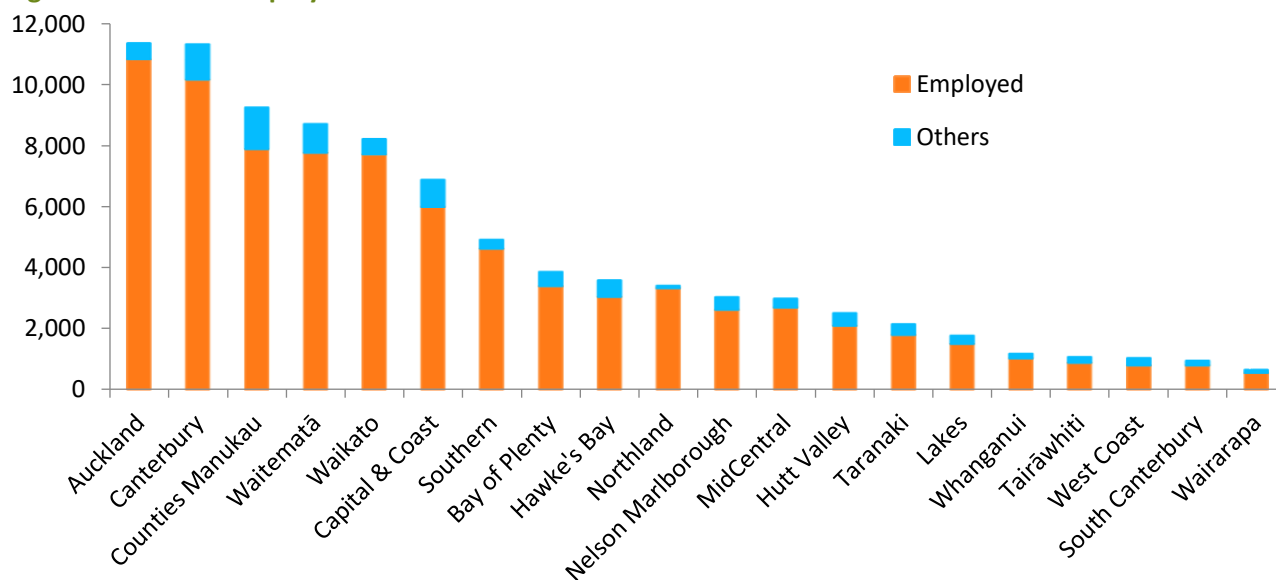 who have not been reported with an employment status code). The chart has been ordered in descending order of DHB workforce size. The table below the chart gives the actual count of employees.

Figure 1: Count of employees

Table 1: Distribution of employment types

DHB	Employed	Others	Total	Proportion of DHB workforce
Auckland	10,809	533	11,342	12.8%
Canterbury	10,140	1,169	11,309	12.7%
Counties Manukau	7,865	1,371	9,236	10.4%
Waitematā	7,742	949	8,691	9.8%
Waikato	7,685	524	8,209	9.3%
Capital & Coast	5,973	906	6,879	7.8%
Southern	4,617	292	4,909	5.5%
Bay of Plenty	3,382	472	3,854	4.3%
Hawke's Bay	3,036	538	3,574	4.0%
Northland	3,312	95	3,407	3.8%
Nelson Marlborough	2,622	420	3,042	3.4%
MidCentral	2,682	306	2,988	3.4%
Hutt Valley	2,097	407	2,504	2.8%
Taranaki	1,792	347	2,139	2.4%
Lakes	1,501	272	1,773	2.0%
Whanganui	1,028	147	1,175	1.3%
Tairāwhiti	886	186	1,072	1.2%
West Coast	791	250	1,041	1.2%
South Canterbury	791	163	954	1.1%
Wairarapa	541	104	645	0.7%
Grand Total	**79,292**	**9,451**	**88,743**	**100.0%**

INCLUSIONS AND EXCLUSIONS

Specific caveats and definitions relevant to charts and tables have been provided throughout the report and should be noted. Additionally, all charts and tables that follow in this document are derived from data using the following caveats:

Inclusions:

- Only employees who have positive contract hours have been included; those with zero contract hours or are classified as on parental leave or leave without pay have been excluded.
- Charts containing 'Age' include all employees who have a calculated age between 15 and 99.

Exclusions:

- Data has been excluded when it does not match the reporting variable standard format (i.e. if a gender code has not been assigned then the employee will be excluded from that chart or table).
- For privacy reasons some data has been suppressed for numbers less than five.
- Any employee who has an employment end date entered (before or during the reporting quarter) has also been excluded since they left employment before the end of the reporting quarter.
- Charts containing 'ethnicity', exclude employees who do not have a valid ethnicity code.

Calculations:

- Percentage sick leave hours is calculated by dividing the number of sick leave hours taken by the contracted hours (excluding those with zero contracted hours). It excludes staff who started or terminated employment in the reporting quarter.
- Annual leave balance to entitlement calculations exclude staff who started or terminated employment in the reporting quarter and those staff who have no reported entitlement to annual leave.
- Because of the way start dates are reported the length of service is most likely to be based on the length of service within the DHB rather than the length of service of the reported position.

HEADCOUNT AND FTE BY DHB AND OCCUPATION GROUP

The following table shows the headcount of employees by their occupation grouping and DHB. It also includes columns for full-time equivalent counts (Contracted FTE, using a 2086 hour annual contract) and mean FTE (the average FTE calculation for all employees). Employees who do not have a contract of more than zero hours are excluded.

Table 2: Headcount and FTE by DHB and occupation group

DHB	Nursing			Corporate and other			Allied & scientific			Care and support			SMO			RMO			Midwifery		
	Head count	FTE	Mean FTE	Head count	FTE	Mean FTE	Head count	FTE	Mean FTE	Head count	FTE	Mean FTE	Head count	FTE	Mean FTE	Head count	FTE	Mean FTE	Head count	FTE	Mean FTE
Auckland	3,964	3,369.0	0.85	2,037	1,821.3	0.89	2,161	1,900.3	0.88	699	650.0	0.93	1,140	924.9	0.81	632	627.5	0.99	176	131.9	0.75
Bay of Plenty	1,360	1,042.8	0.77	668	587.7	0.88	510	427.0	0.84	337	279.3	0.83	248	204.8	0.83	201	200.1	1.00	58	38.0	0.66
Canterbury	3,846	3,186.1	0.83	2,244	1,962.4	0.87	1,673	1,380.6	0.83	1,039	824.9	0.79	638	541.1	0.85	552	544.4	0.99	148	99.4	0.67
Capital & Coast	2,468	1,977.1	0.80	1,243	1,137.8	0.92	822	708.6	0.86	448	396.1	0.88	455	360.9	0.79	414	399.1	0.96	123	88.0	0.72
Counties Manukau	3,027	2,577.1	0.85	1,444	1,236.5	0.86	1,222	1,054.9	0.86	893	786.4	0.88	597	510.0	0.85	465	456.4	0.98	217	161.5	0.74
Hawke's Bay	1,174	845.4	0.72	636	548.2	0.86	488	395.7	0.81	336	268.7	0.80	164	139.6	0.85	168	163.6	0.97	70	37.9	0.54
Hutt Valley	721	577.4	0.80	451	405.6	0.90	306	252.0	0.82	236	203.7	0.86	163	124.0	0.76	174	169.7	0.98	46	32.2	0.70
Lakes	584	453.9	0.78	347	309.5	0.89	201	167.4	0.83	139	115.4	0.83	110	95.8	0.87	85	85.0	1.00	35	27.7	0.79
MidCentral	1,122	924.4	0.82	621	575.7	0.93	368	326.5	0.89	193	160.6	0.83	172	153.3	0.89	153	151.8	0.99	53	37.6	0.71
Nelson Marlborough	856	629.8	0.74	599	495.4	0.83	372	278.0	0.75	482	335.4	0.70	158	127.6	0.81	98	95.8	0.98	57	38.1	0.67
Northland	1,283	980.9	0.76	629	538.4	0.86	495	418.8	0.85	488	343.5	0.70	207	199.3	0.96	139	138.0	0.99	71	43.5	0.61
South Canterbury	330	252.2	0.76	155	119.2	0.77	109	83.3	0.76	77	55.3	0.72	70	50.4	0.72	26	25.9	1.00	24	17.6	0.74
Southern	1,915	1,529.5	0.80	887	792.8	0.89	724	623.9	0.86	378	303.4	0.80	325	287.1	0.88	317	310.0	0.98	71	47.9	0.67
Tairāwhiti	354	284.3	0.80	211	190.6	0.90	123	105.5	0.86	90	76.4	0.85	56	50.9	0.91	31	30.8	0.99	21	16.3	0.78
Taranaki	677	503.6	0.74	415	367.7	0.89	258	206.3	0.80	187	154.3	0.83	136	115.6	0.85	91	89.5	0.98	28	20.5	0.73
Waikato	2,965	2,505.1	0.84	1,638	1,470.0	0.90	1,129	988.9	0.88	914	771.2	0.84	462	409.6	0.89	469	457.9	0.98	108	79.6	0.74
Wairarapa	254	172.3	0.68	121	97.6	0.81	64	47.4	0.74	51	31.5	0.62	26	22.8	0.88	**	4.0	1.00	< 28	12.5	0.60
Waitematā	2,692	2,281.8	0.85	1,397	1,209.1	0.87	1,439	1,200.5	0.83	1,085	949.0	0.87	566	477.9	0.84	385	375.5	0.98	178	116.0	0.65
West Coast	317	264.4	0.83	195	166.4	0.85	84	75.3	0.90	140	99.7	0.71	34	25.5	0.75	< 15	8.7	0.97	< 18	9.3	0.78
Whanganui	446	355.2	0.80	210	190.2	0.91	135	108.3	0.80	116	96.3	0.83	54	49.2	0.91	46	46.0	1.00	21	15.6	0.74
Grand Total	30,355	24,712.2	0.81	16,148	14,222.1	0.88	12,683	10,749.2	0.85	8,328	6,901.1	0.83	5,781	4,870.3	0.84	4,459	4,379.8	0.98	1,538	1,071.2	0.70

TABLES AND CHARTS BY OCCUPATION GROUPING

HEADCOUNT AND FTE BY OCCUPATION GROUPING AND GENDER

The bars represent the headcount (left hand axis) of employees by gender and occupation grouping, and the triangles represent the average FTE for those employees (right hand axis), also by gender and occupation grouping.

Figure 2: Occupation group headcount and mean FTE by gender
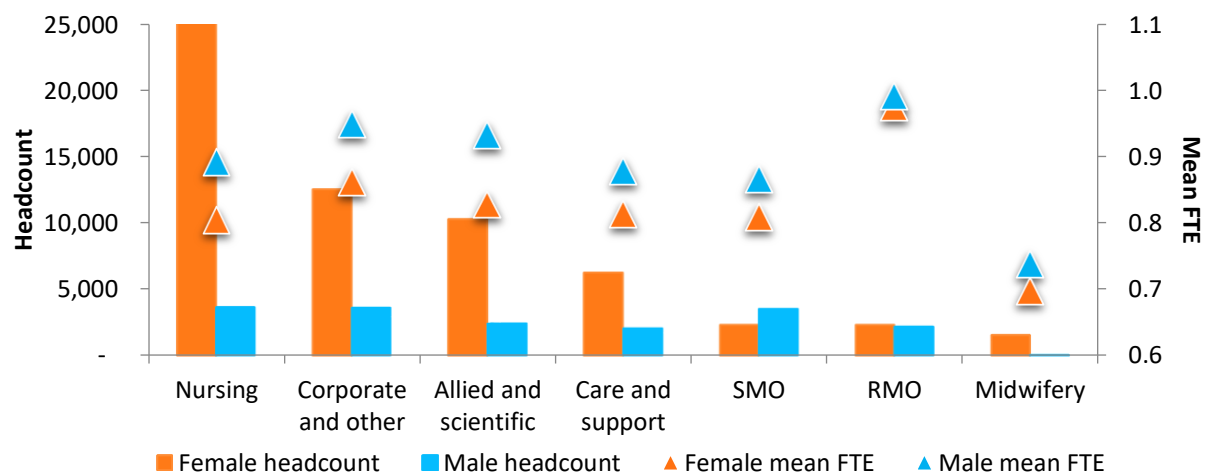
Table 3: Occupation group headcount and mean FTE by gender

Occupation group	Female		Male		Total	
	Headcount	Mean FTE	Headcount	Mean FTE	Headcount	Mean FTE
Nursing	26,756	0.80	3,596	0.89	30,355	0.81
Corporate and other	12,578	0.86	3,570	0.95	16,148	0.88
Allied and scientific	10,289	0.83	2,394	0.93	12,683	0.85
Care and support	6,284	0.81	2,043	0.88	8,328	0.83
SMO	2,312	0.81	3,469	0.87	5,781	0.84
RMO	> 2,320	0.97	< 2,140	0.99	4,459	0.98
Midwifery	> 1,533	0.70	**	0.74	1,538	0.70
Grand Total	**62,078**	**0.82**	**> 17,200**	**0.91**	**79,292**	**0.84**

**   Data suppressed (headcounts less than 5)

Some values have been expressed as ranges to ensure anonymity of the small number of employees reported as gender diverse.

HEADCOUNT BY OCCUPATION GROUP AND ETHNICITY

This chart shows the proportion (not the actual count of employees) of ethnicities reported within each occupation group. The table below details the actual count of employees for whom an ethnicity was reported.

The pie chart, on the next page, shows the distribution of all reported ethnicities for all DHBs.
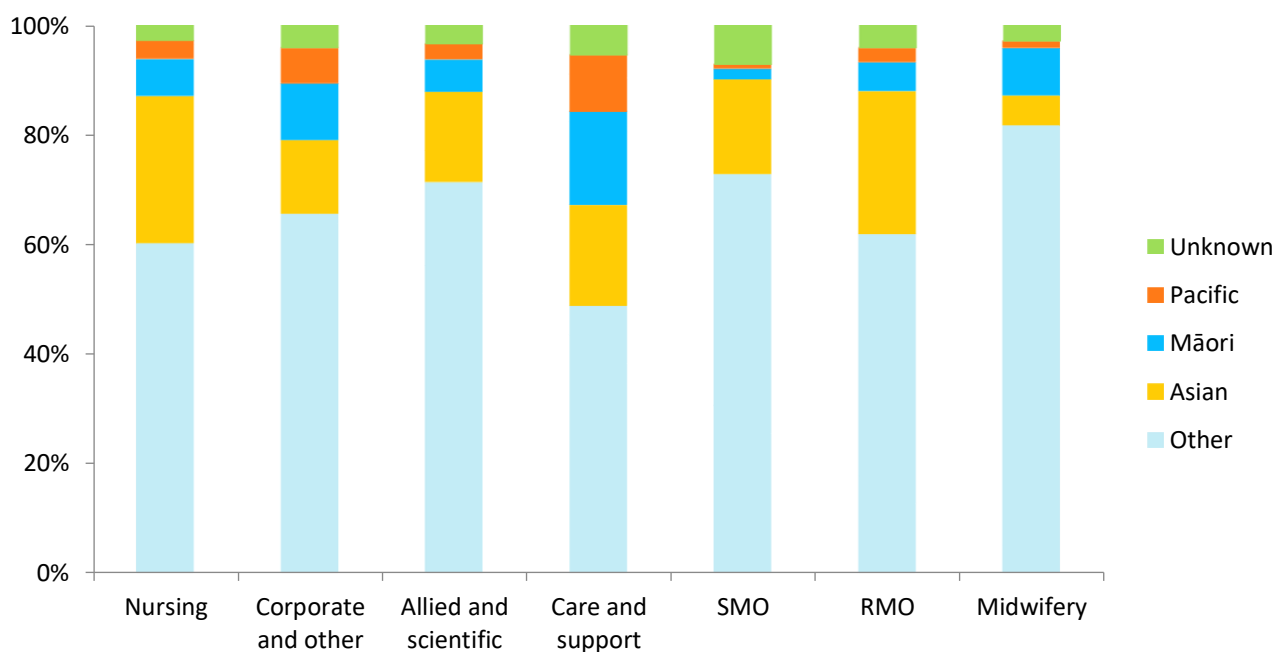
Figure 3: Proportion of ethnicities by occupation group

Table 4: Count and proportion of ethnicities by occupation group

Occupation group	Other*		Asian		Māori		Pacific		Unknown		Total
Nursing	18,315	60.3%	8,158	26.9%	2,032	6.7%	1,022	3.4%	828	2.7%	30,355
Corporate and other	10,600	65.6%	2,188	13.5%	1,662	10.3%	1,037	6.4%	661	4.1%	16,148
Allied and scientific	9,058	71.4%	2,096	16.5%	745	5.9%	360	2.8%	424	3.3%	12,683
Care and support	4,074	48.9%	1,534	18.4%	1,424	17.1%	852	10.2%	444	5.3%	8,328
SMO	4,213	72.9%	1,003	17.3%	112	1.9%	50	0.9%	403	7.0%	5,781
RMO	2,762	61.9%	1,162	26.1%	239	5.4%	115	2.6%	181	4.1%	4,459
Midwifery	1,258	81.8%	84	5.5%	132	8.6%	20	1.3%	44	2.9%	1,538
Grand Total	**50,280**	**63.4%**	**16,225**	**20.5%**	**6,346**	**8.0%**	**3,456**	**4.4%**	**2,985**	**3.8%**	**79,292**

* 'Other' is a group amalgamation of all ethnicities that do not fall into the groups Asian, Māori or Pacific.

This pie chart is based on the 76,307 permanent employees who declared their ethnicity as Asian, Māori, Pacific or Other. Below this is a similar pie chart of ethnicity proportions in the New Zealand population based on projections of population data by Statistics New Zealand for 30 September 2020.
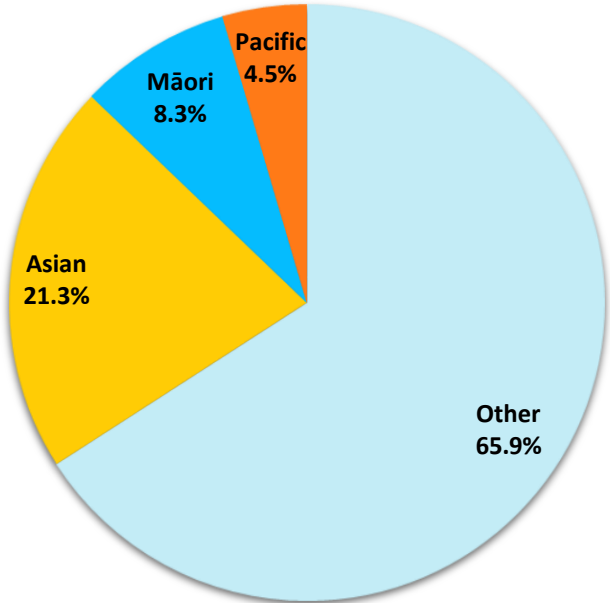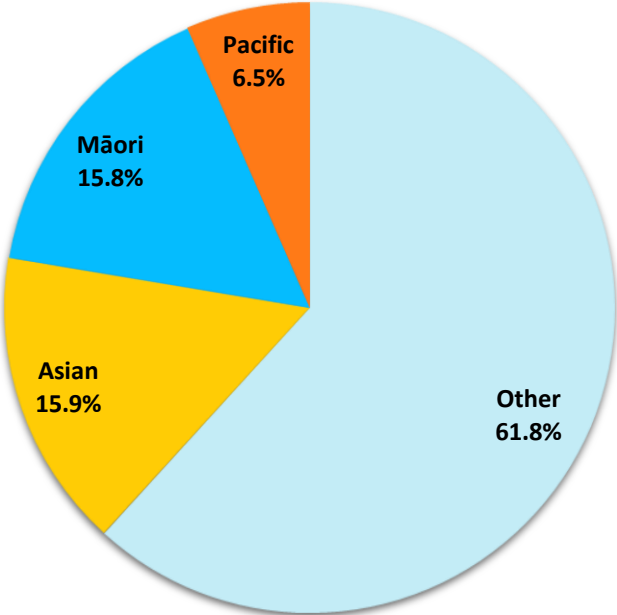

Figure 5: Proportion of identifiable ethnicities for projected population data at 30 September 2020

AGES AND LENGTH OF SERVICE

Figure 6: Mean ages and length of service by occupation group and gender

The bars in this chart show the average age (left hand axis) for each occupation group by gender. The triangles represent the average length of service (right hand axis), also by occupation group and gender.
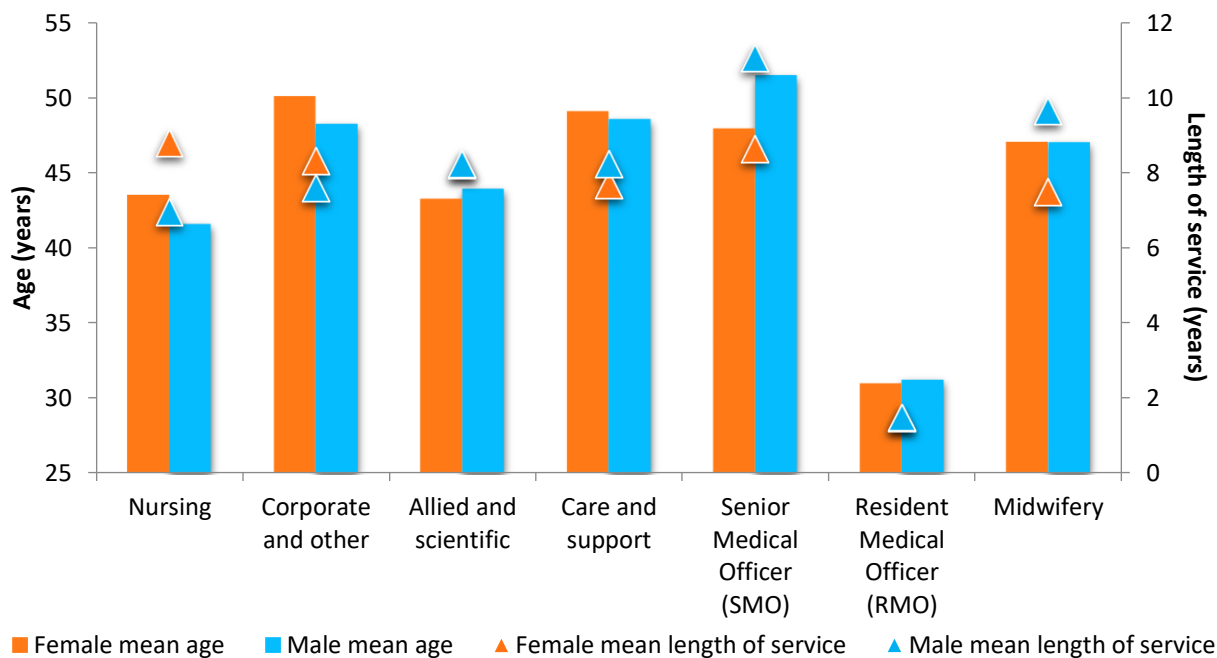
The following table gives the actual figures behind the chart above.

Table 5: Mean ages and length of service by occupation group and gender

Occupation group	Female		Male		Total	
	Mean length of service	Mean age	Mean length of service	Mean age	Mean length of service	Mean age
Nursing	8.8	43.5	7.0	41.6	8.6	43.3
Corporate and other	8.3	50.0	7.6	48.2	8.2	49.6
Allied and scientific	8.2	43.2	8.2	43.9	8.2	43.4
Care and support	7.7	49.0	8.2	48.5	7.8	48.9
SMO	8.6	47.9	11.1	51.4	10.1	50.0
RMO	1.4	30.9	1.5	31.2	1.5	31.1
Midwifery	7.5	47.0	9.7	47.0	7.5	47.0
Grand Total	**8.2**	**45.1**	**7.6**	**44.8**	**8.0**	**45.0**

TABLES AND CHARTS BY DHB

This section looks at the same statistics given in the first section but broken down by DHB rather than occupation group. Page 7 has a table of figures for FTE and headcount which looks at both DHB and occupation grouping.

COUNT OF EMPLOYEES AND MEAN FTE BY GENDER AND DHB

This chart examines the number (headcount) of employees by gender and DHB (left hand axis). The DHBs have been ordered in descending size of employee headcount. The right hand axis refers to the mean FTE for all employees (by DHB and gender). The following table shows the count of employees and mean FTE by gender for each DHB.

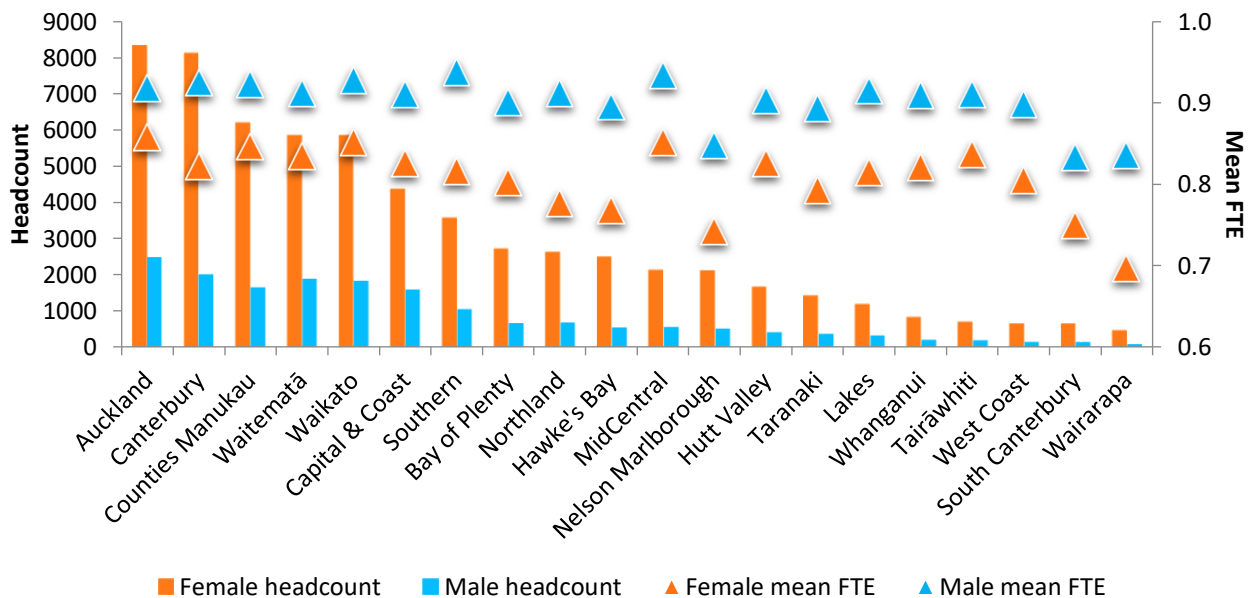**Figure 7: Headcount and mean FTE by gender and DHB**

Table 6: Headcount and mean FTE by gender and DHB

		Auckland	Canterbury	Counties Manukau	Waitematā	Waikato	Capital & Coast	Southern	Bay of Plenty	Northland	Hawke's Bay	MidCentral	Nelson Marlborough	Hutt Valley	Taranaki	Lakes	Whanganui	Tairāwhiti	West Coast	South Canterbury	Wairarapa
Female	Headcount	8,336	8,132	6,213	5,857	5,860	4,381	3,578	2,719	2,641	2,501	2,130	2,119	1,683	1,433	1,187	832	705	652	657	462
	Mean FTE	0.86	0.82	0.85	0.83	0.85	0.83	0.82	0.80	0.78	0.77	0.85	0.74	0.83	0.79	0.81	0.82	0.84	0.80	0.75	0.70
Male	Headcount	2,471	2,008	1,652	1,885	1,824	1,592	1,039	663	671	535	552	503	414	359	314	195	181	139	134	79
	Mean FTE	0.92	0.92	0.92	0.91	0.93	0.91	0.94	0.90	0.91	0.90	0.93	0.85	0.90	0.89	0.92	0.91	0.91	0.90	0.83	0.84
Total	Headcount	10,809	10,140	7,865	7,742	7,684	5,973	4,617	3,382	3,312	3,036	2,682	2,622	2,097	1,792	1,501	1,027	886	791	791	541
	Mean FTE	0.87	0.84	0.86	0.85	0.87	0.85	0.84	0.82	0.80	0.79	0.87	0.76	0.84	0.81	0.84	0.84	0.85	0.82	0.76	0.72

MEAN AGES AND MEAN LENGTH OF SERVICE BY DHB AND GENDER

This chart shows the mean age of employees in each DHB by gender (left hand axis) and has been ordered by descending average age. The triangles represent the average length of service (right hand axis) by gender and DHB.

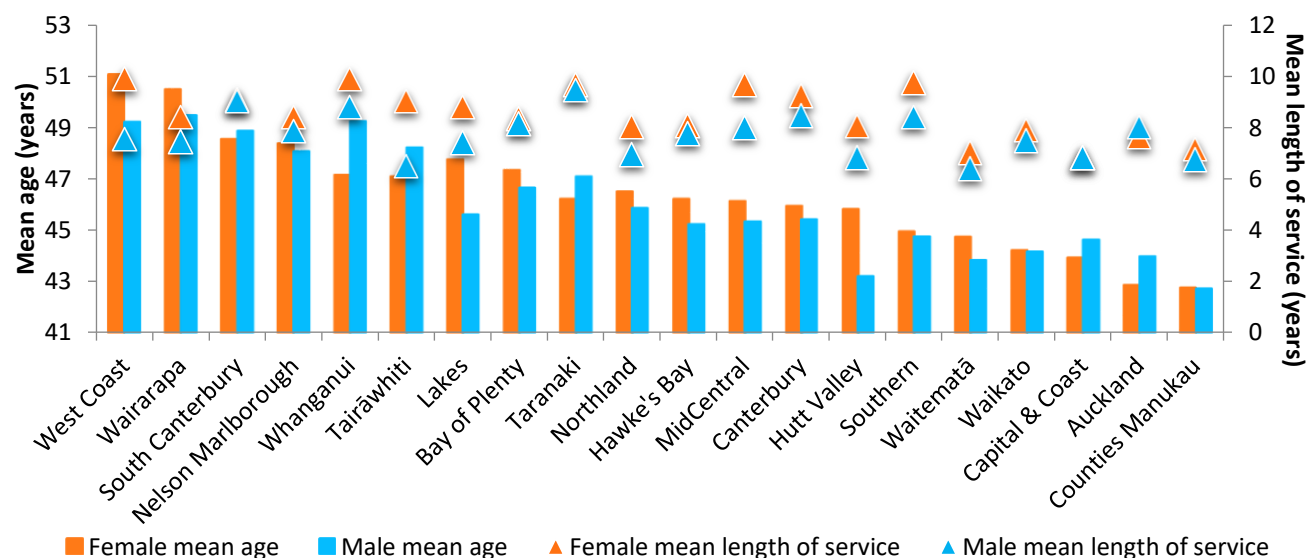**Figure 8: Mean ages and mean length of service by DHB and gender**

Legend: ■ Female mean age ■ Male mean age ▲ Female mean length of service ▲ Male mean length of service

Table 7: Mean ages and mean length of service by DHB and gender

DHB	Female mean length of service	Female mean age	Male mean length of service	Male mean age	All staff mean length of service	All staff mean age
West Coast	9.9	51.1	7.5	49.2	9.5	50.8
Wairarapa	8.4	50.5	7.4	49.5	8.3	50.4
South Canterbury	9.1	48.6	9.0	48.9	9.1	48.6
Nelson Marlborough	8.4	48.4	7.9	48.1	8.3	48.3
Whanganui	9.9	47.2	8.8	49.2	9.7	47.6
Tairāwhiti	9.0	47.1	6.5	48.2	8.5	47.3
Lakes	8.8	47.8	7.4	45.6	8.5	47.3
Bay of Plenty	8.3	47.4	8.1	46.6	8.3	47.2
Taranaki	9.7	46.2	9.5	47.1	9.6	46.4
Northland	8.0	46.5	6.9	45.8	7.8	46.4
Hawke's Bay	8.1	46.2	7.8	45.2	8.0	46.0
MidCentral	9.7	46.1	8.0	45.3	9.3	46.0
Canterbury	9.2	46.0	8.5	45.4	9.1	45.9
Hutt Valley	8.0	45.8	6.8	43.2	7.8	45.3
Southern	9.8	44.9	8.4	44.7	9.5	44.9
Waitematā	7.0	44.7	6.4	43.8	6.9	44.5
Waikato	7.9	44.2	7.5	44.2	7.8	44.2
Capital & Coast	6.8	43.9	6.8	44.6	6.8	44.1
Auckland	7.6	42.9	8.0	44.0	7.7	43.1
Counties Manukau	7.2	42.8	6.7	42.7	7.1	42.8
Grand Total	**8.2**	**45.1**	**7.6**	**44.8**	**8.0**	**45.0**

ETHNICITIES BY DHB

The following chart shows the proportion of ethnicities within each DHB employee population (ordered by descending proportion of 'unknown' ethnicities). It does not represent the actual number of people by each ethnicity; this is detailed in the table further below.

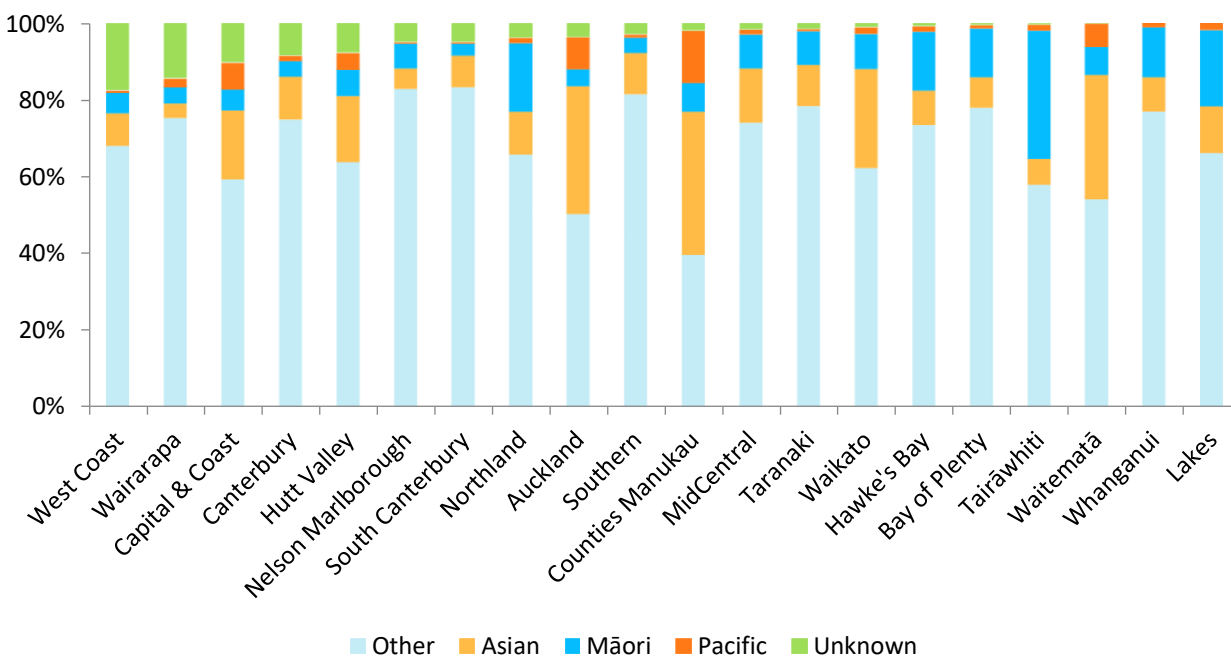**Figure 9: Proportion of reported ethnicities by DHB**

Table 8: Distribution of reported ethnicities by DHB

DHB	Other*	Asian	Māori	Pacific	Unknown	Total
West Coast	537	69	44	5	136	791
Wairarapa	407	21	24	12	77	541
Capital & Coast	3,546	1,075	340	405	607	5,973
Canterbury	7,586	1,150	423	131	850	10,140
Hutt Valley	1,338	362	145	92	160	2,097
Nelson Marlborough	2,169	144	170	13	126	2,622
South Canterbury	658	66	25	**	> 33	791
Northland	2,175	375	594	44	124	3,312
Auckland	5,452	3,578	502	895	382	10,809
Southern	3,757	503	184	40	133	4,617
Counties Manukau	3,130	2,931	604	1,049	151	7,865
MidCentral	1,985	380	238	36	43	2,682
Taranaki	1,403	194	158	11	26	1,792
Waikato	4,782	1,987	705	131	80	7,685
Hawke's Bay	2,227	275	466	43	25	3,036
Bay of Plenty	2,635	272	429	28	18	3,382
Tairāwhiti	513	61	295	> 9	**	886
Waitematā	4,197	2,503	570	466	6	7,742
Whanganui	791	93	133	11	0	1,028
Lakes	992	186	297	26	0	1,501
Grand Total	**50,280**	**16,225**	**6,346**	**3,456**	**2,985**	**79,292**

 * 'Other' is a group amalgamation of all ethnicities that do not fall into the groups Asian, Māori or Pacific.

 ** Data suppressed (headcounts less than 5)

ANALYSIS BY DHB AND OCCUPATION GROUP

LENGTH OF SERVICE BY OCCUPATION GROUP AND DHB

The following table shows the mean length of service for each occupation group by DHB. To read this table, look at the occupation column. The green colours represent a longer than national average length of service, the yellow colours are similar to the national average while red colours are lower than the national average. The final column (all staff) has ordered the DHBs by longer to shorter lengths of service.

Table 9: Mean length of service by occupation group and DHB

DHB	Nursing	Corporate and other	Allied and scientific	Care and support	SMO	RMO	Midwifery	All staff
Whanganui	10.1	9.8	10.7	9.7	9.7	1.1	11.2	9.7
Taranaki	10.4	10.3	9.8	10.4	7.8	1.7	8.2	9.6
West Coast	10.2	7.7	10.3	11.3	5.8	1.5	8.5	9.5
Southern	10.8	9.6	8.6	8.4	10.9	2.3	9.0	9.5
MidCentral	10.3	9.4	9.2	8.1	10.8	1.9	8.9	9.3
South Canterbury	9.9	8.7	9.5	11.0	6.9	1.1	6.8	9.1
Canterbury	10.0	8.0	9.7	9.1	11.3	2.4	9.1	9.1
Tairāwhiti	10.3	7.7	7.9	7.7	8.5	1.0	5.4	8.5
Lakes	9.6	8.9	8.4	8.2	7.9	1.6	7.6	8.5
Nelson Marlborough	9.4	7.3	7.9	8.7	10.6	1.5	6.3	8.3
Bay of Plenty	9.3	9.0	7.5	7.3	9.4	1.6	7.1	8.3
Wairarapa	9.2	6.5	9.6	7.9	9.0	0.2	4.8	8.3
Hawke's Bay	8.4	8.5	8.6	7.4	10.0	1.7	7.2	8.0
Northland	8.4	9.0	8.6	5.4	8.7	1.4	7.4	7.8
Waikato	8.3	8.2	8.3	6.8	10.2	2.1	7.1	7.8
Hutt Valley	8.7	8.3	8.0	8.5	8.7	0.9	6.8	7.8
Auckland	7.6	7.9	8.0	8.9	10.5	0.8	7.0	7.7
Counties Manukau	7.0	8.0	7.0	7.0	10.3	0.7	7.6	7.1
Waitematā	6.8	7.1	7.6	6.5	9.8	0.7	6.7	6.9
Capital & Coast	7.0	6.8	6.6	8.1	10.1	1.3	7.1	6.8
Grand Total	8.6	8.2	8.2	7.8	10.1	1.5	7.5	8.0

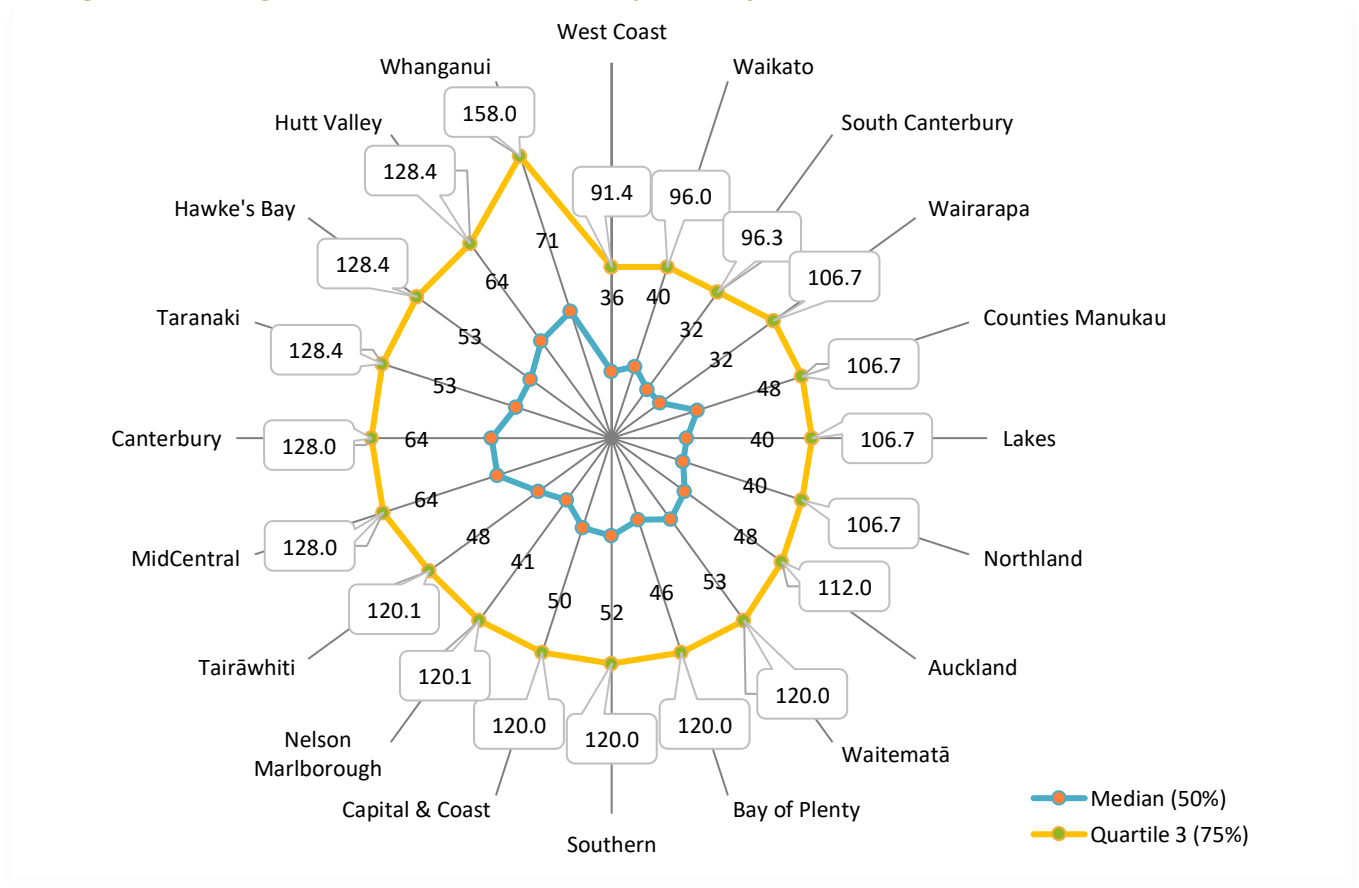# ANALYSIS BY SICK LEAVE & ANNUAL LEAVE

SICK LEAVE BY DHB, OCCUPATION GROUP, AGE GROUP AND ETHNICITY BY GENDER

The following radar chart shows the dispersion of sick leave by DHB by looking at the average annualised sick leave hours per contracted FTE. It is based on all contracted employees not on long term leave and excluding those who commenced employment during the reporting quarter, regardless of the amount of sick leave taken during this reporting quarter. The process of annualising the quarter's reported sick leave hours may amplify the impact of outlier events, whether these are negative values (reported to correct an over-statement in a previous quarter) or a potential over-reporting, where a person reportedly took more sick leave than we would expect them to have worked based on their contracted FTE.

To read this graph, the blue line indicates the median (50%) sick leave hours per FTE; i.e. 50% of staff took sick leave hours (per FTE) at or below this value. The yellow line indicates the 3rd quartile (75%) sick leave hours per FTE; i.e. 75% of staff took sick leave hours (per FTE) at or below this value. The order of least sick leave hours per FTE to the most sick leave hours per FTE taken runs clockwise from 12 o'clock.
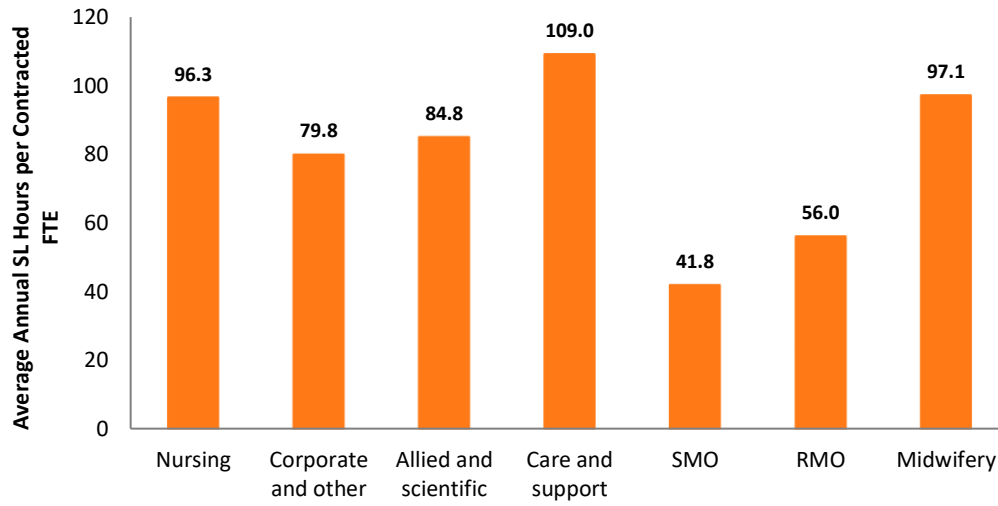
For example, the data for Waikato shows that (if the September quarter is indicative) 50% of staff would have taken 40 hours sick leave or less (note comments on negative sick leave values above) per FTE over the course of a year, and 75% of staff would have taken 96 hours or less of sick leave per FTE over the course of a year.

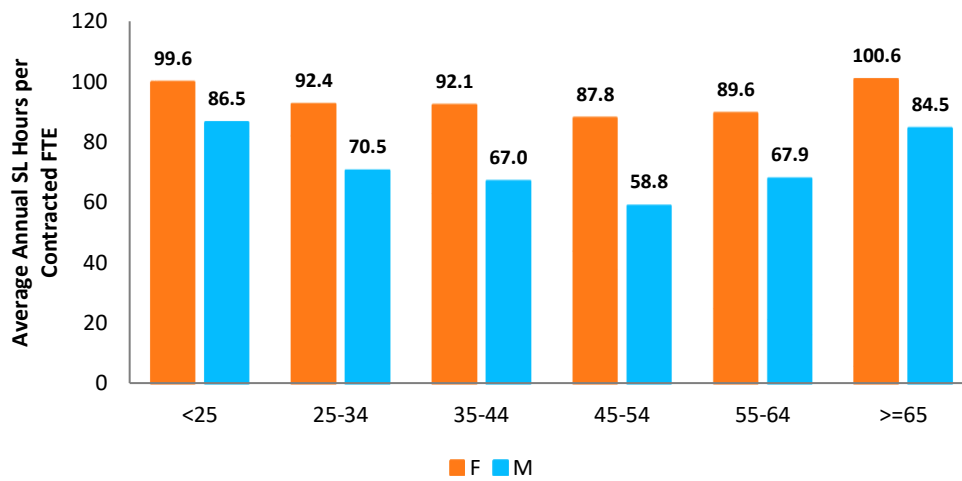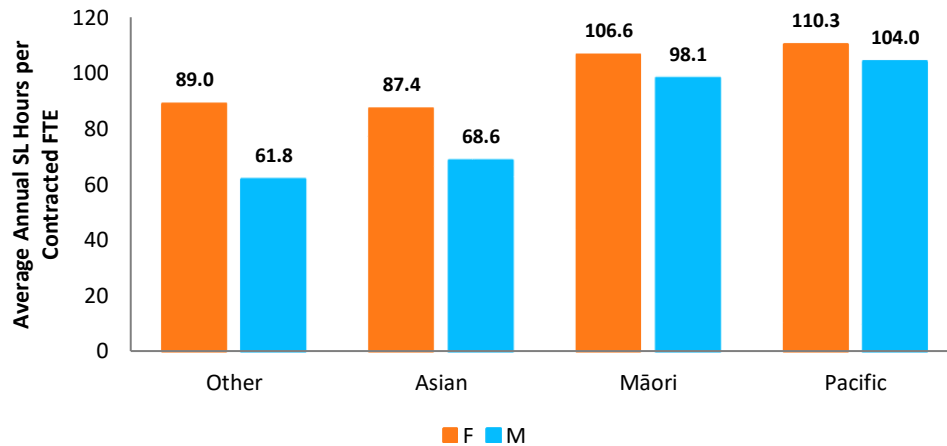**Figure 10: Average annualised sick leave hours per FTE by DHB**

Figure 11: Average annual sick leave hours per FTE by occupational group

Occupational group	Average Annual SL Hours per Contracted FTE
Nursing	96.3
Corporate and other	79.8
Allied and scientific	84.8
Care and support	109.0
SMO	41.8
RMO	56.0
Midwifery	97.1

Figure 12: Average annual sick leave hours per FTE by age group by gender

Age group	F	M
<25	99.6	86.5
25-34	92.4	70.5
35-44	92.1	67.0
45-54	87.8	58.8
55-64	89.6	67.9
>=65	100.6	84.5

Figure 13: Average annual sick leave hours per FTE by ethnicity by gender

Ethnicity	F	M
Other	89.0	61.8
Asian	87.4	68.6
Māori	106.6	98.1
Pacific	110.3	104.0

RATIO OF ANNUAL LEAVE BALANCE AND ANNUAL LEAVE ENTITLEMENT BY DHB, OCCUPATION GROUP AND ETHNICITY BY GENDER

In the first chart, the bars represent the ratios of annual leave balance to annual leave entitlement and the blue dotted line represents the national average. For example, a value of 100% means that on average the DHB employees have an annual leave balance equal to their annual leave entitlement. The chart shows that for the first twelve DHBs, on average their employees have more annual leave balance than annual leave entitlement.

The other two charts on page 19 display the ratio of annual leave balance to entitlement per FTE at the national level, grouped by both Occupation Group and Ethnicity (with gender split).
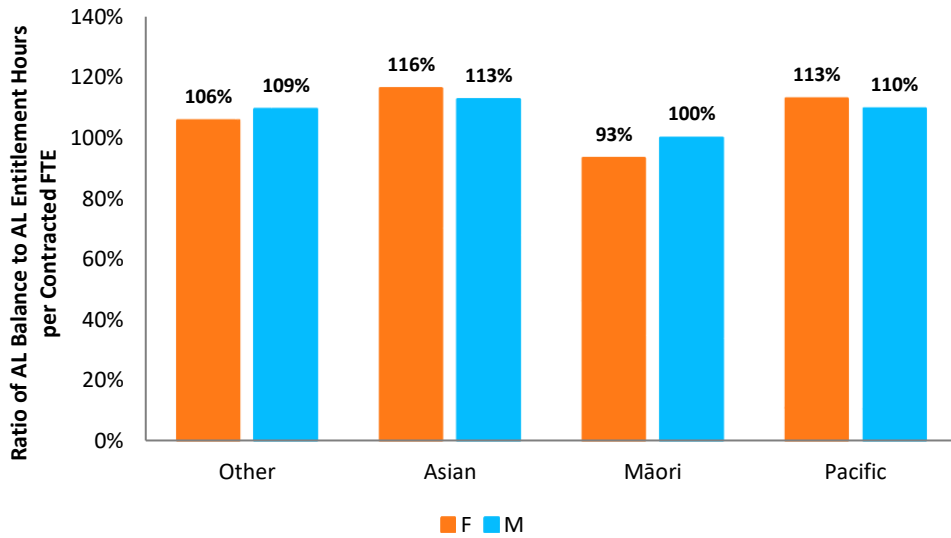
Figure 14: Ratio of annual leave balance to annual leave entitlement hours per FTE by DHB
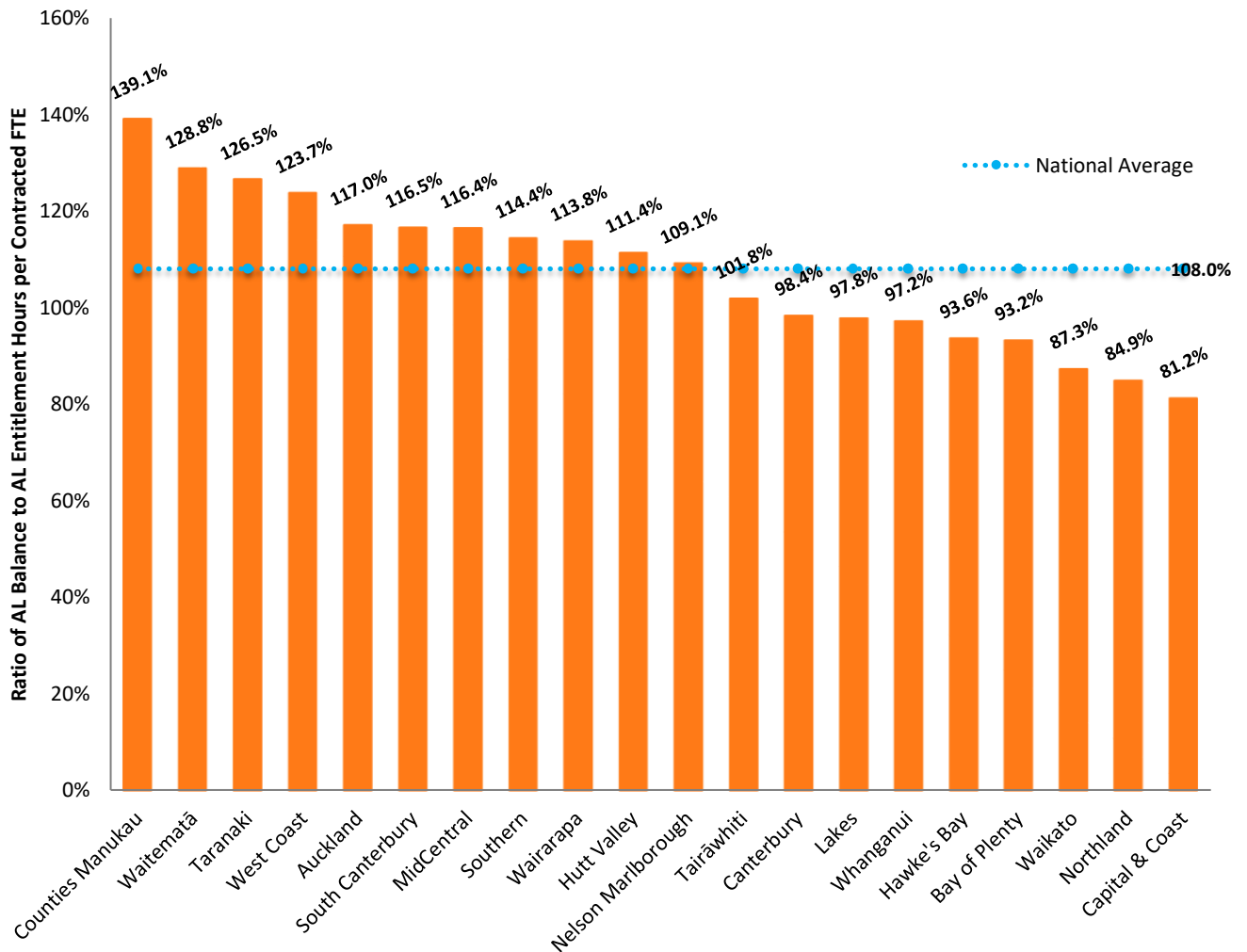
Figure 15: Ratio of annual leave balance to annual leave entitlement hours per FTE by occupational group
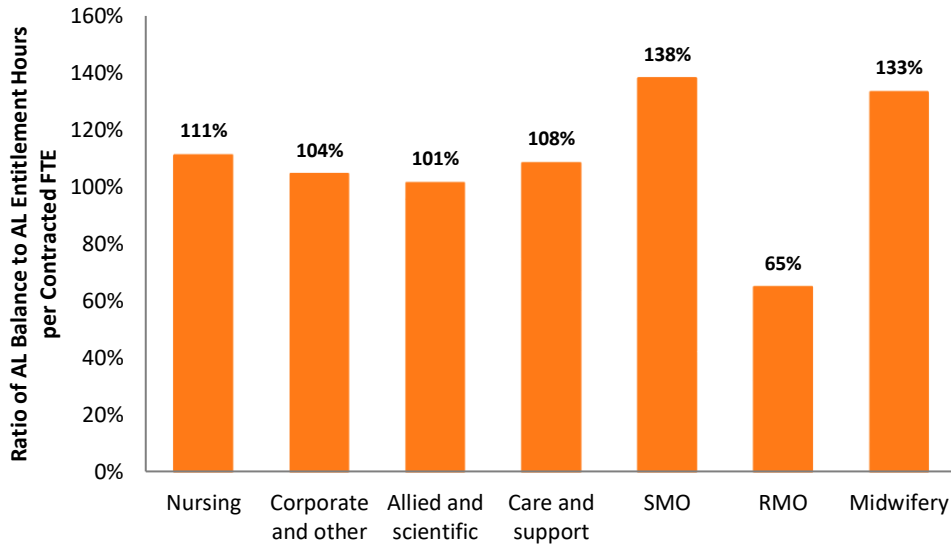
Figure 16: Ratio of annual leave balance to annual leave entitlement hours per FTE by ethnicity by gender

ANALYSIS BY POPULATION

DISTRIBUTION OF OVERALL DHB EMPLOYEES BY AGE, WITH NATIONAL EMPLOYEE DATA

The following chart shows the distribution of ages of DHB employees (histogram with light orange outline). The staggered dark orange line is the distribution of all New Zealand employees for the September 2020 quarter as reported in the Household Labour Force Survey (HLFS) by Statistics New Zealand.

Figure 17: Distribution of overall DHB employees by age, with national employee data
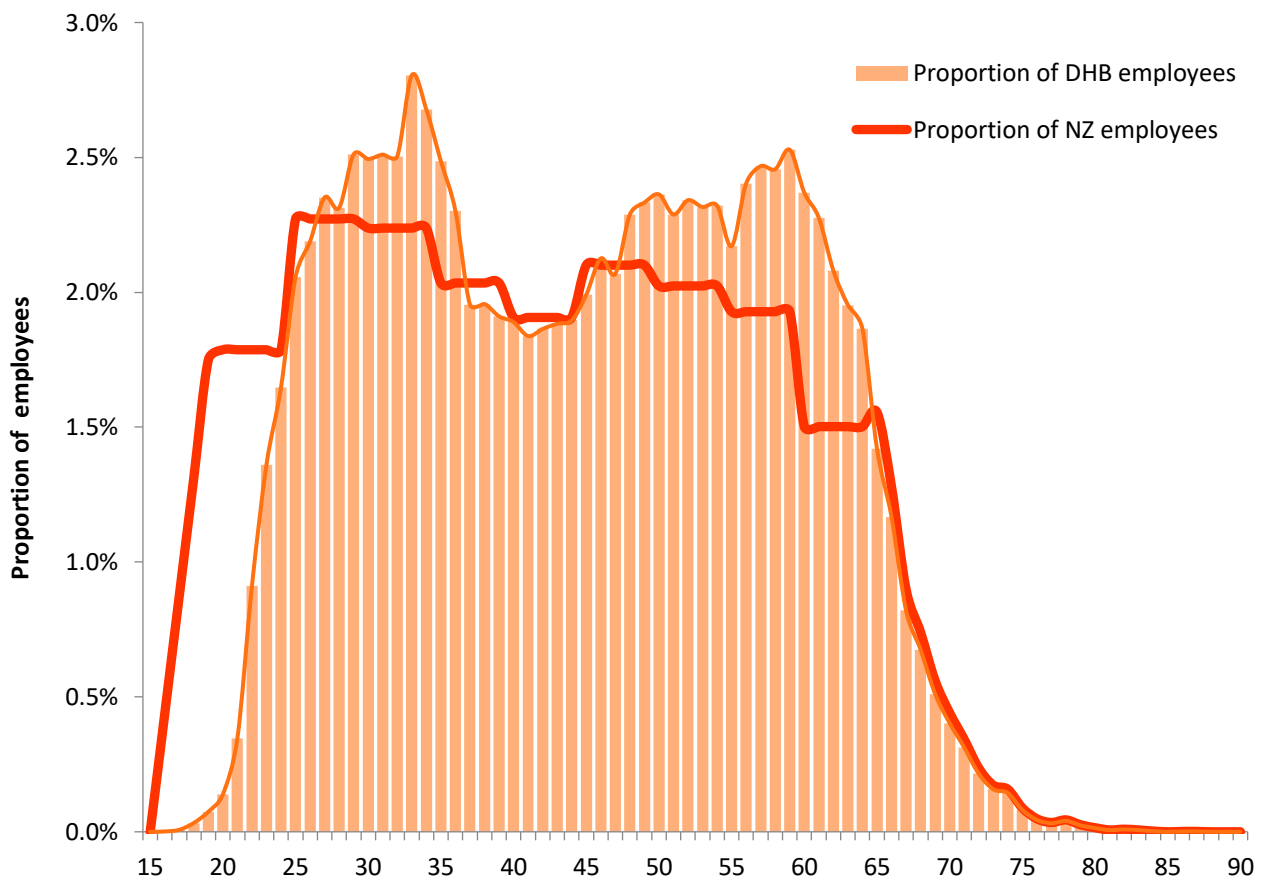
# ETHNIC REPRESENTATION OF WORKFORCE TO RESIDENT POPULATION

The following charts look at the ethnic representation of DHB staff to the resident population.

The calculations look at the percentage of staff with a known ethnicity and compare it to the percentage of DHB residents with a known ethnicity. This latter data has been interpolated from data produced by Statistics New Zealand and is representative for the quarter being reported on. The proportion of staff with a known ethnicity this quarter was 96.2 percent, compared to 88.0 percent in September 2015.

The four ethnicity groups used are: Other, Asian, Māori and Pacific – 'Other' is an amalgamation of all other ethnicities but is primarily European including the 'New Zealander' ethnicity. Throughout these charts this is the order of presentation.

When a bar on a chart is green it means the proportion of that ethnicity in the DHB workforce is greater than the population. If a bar is red then the proportion of the DHB workforce is less than that of the resident population. All charts use the same axis scale (as these are spark lines the numbers are not written against the axes), which range from -25% to +26% - so comparisons between DHBs are possible. The data for 2015 has also been added to show any changes over the last five years.

It is important to note that some DHBs have very small counts by ethnicity; for example South Canterbury has fewer than five Pacific employees. This means the data can be quite volatile. Also, those DHBs that are heavily weighted towards a particular ethnicity in their population such as Pacific people in Counties Manukau or Māori in Waikato, will tend to show greater deviations between the DHB workforce ethnicities and the resident population.
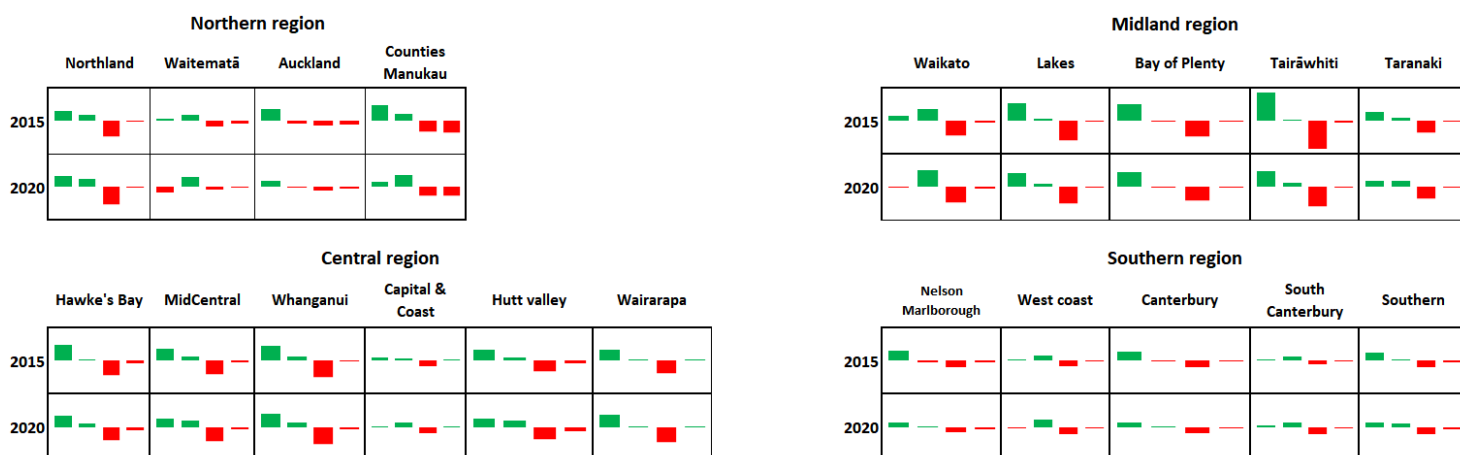

Note: The four bars are ordered as: Other, Asian, Māori and Pacific

For some DHBs the ethnic distribution of their staff closely mirrors that of the resident population, such as Capital & Coast. Overall, the distributions have changed only slightly between 2015 and 2020; the 'Other' ethnicities have reduced closer to zero (from nine down to four percentage points difference), whereas Māori have marginally less under-representation (from negative nine to negative eight percentage points difference).

POPULATION DENSITY BY OCCUPATIONAL GROUP AND DHB

This section looks at the number of staff per resident population. Staff numbers are contracted FTE figures and they are compared to every 100,000 resident population. Midwives has been compared to the fertile female population (aged 15-49). The important factor to consider in this section is that each DHB may have different models of care (the way services are delivered to the population). For example, only six DHBs provide radiation therapy services, so they may appear to have more staff per head of population but they are actually serving the population from many other DHBs.

Figure 18: Population density of Nurses by DHB

FTE Nurses per 100,000 population

National average 491.5
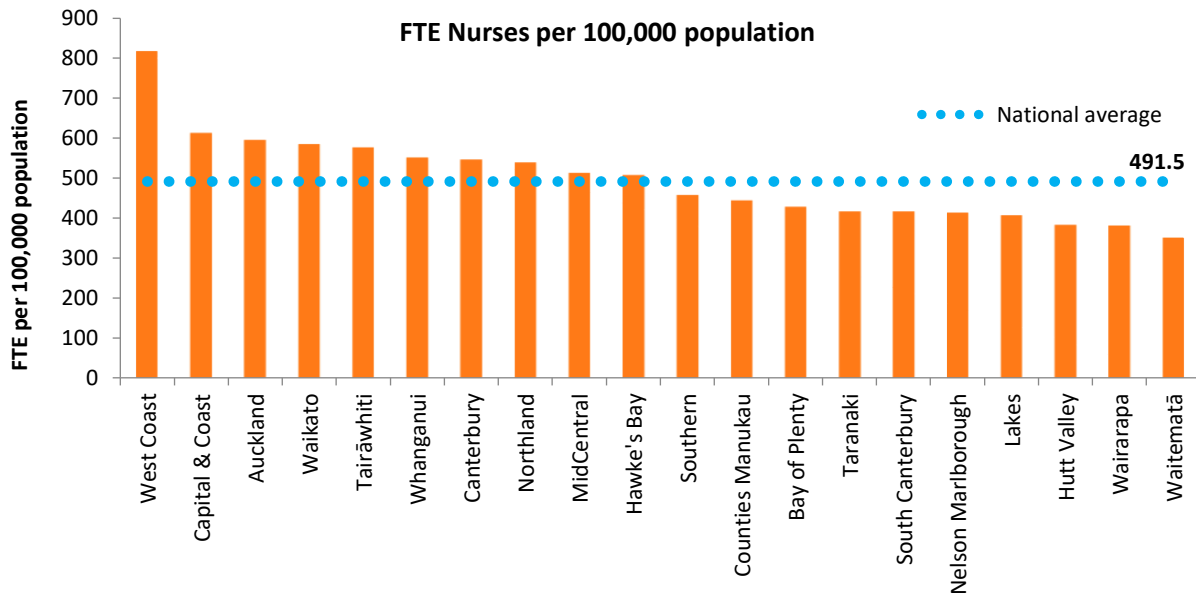
Figure 19: Population density of Corporate & Other by DHB

FTE Corporate & Other per 100,000 population

National average 282.8
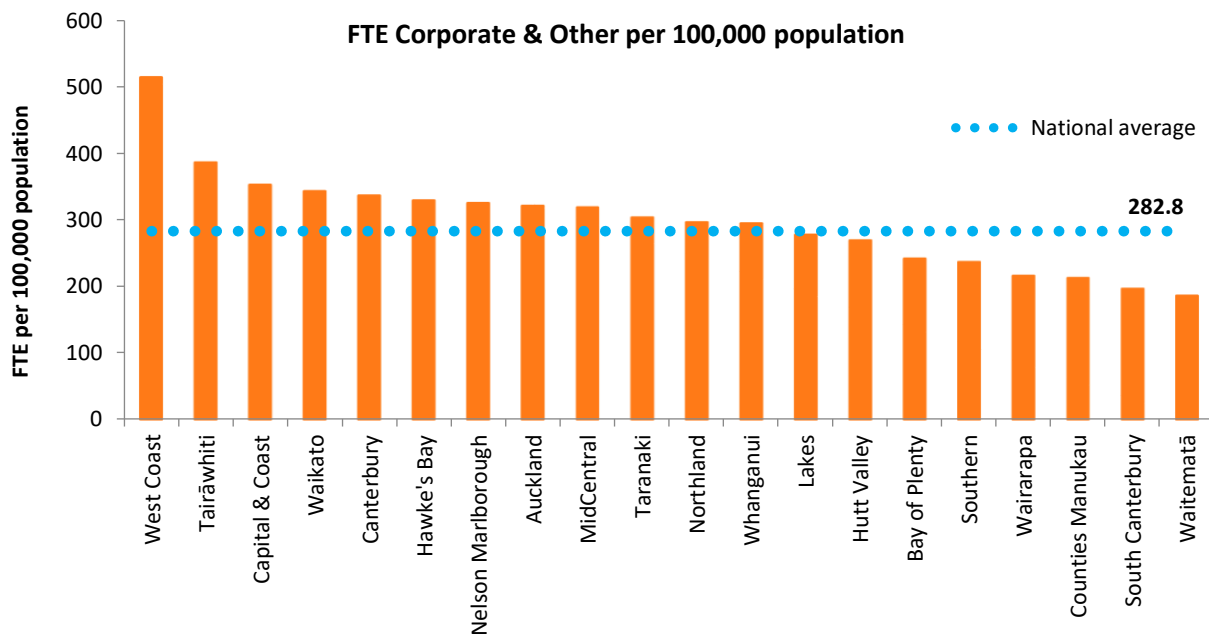
Figure 20: Population density of Allied & Scientific by DHB

FTE Allied & Scientific per 100,000 population

213.8
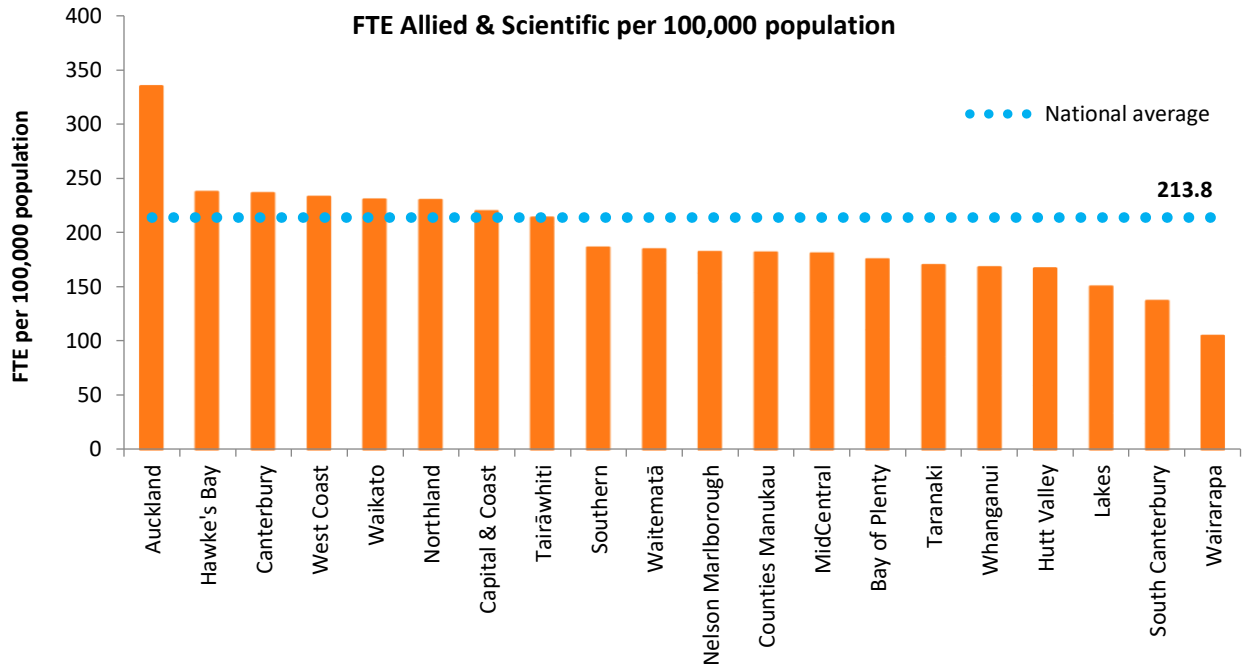
Figure 21: Population density of Care & Support by DHB

FTE Care & Support per 100,000 population

137.2
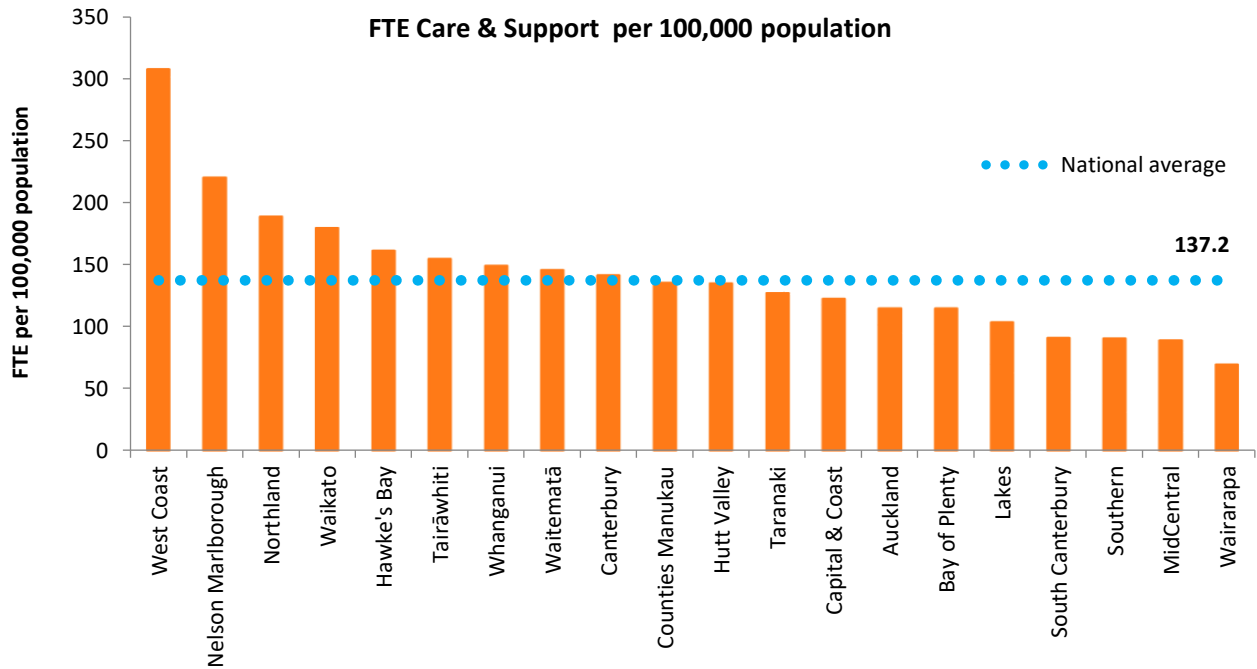
Figure 22: Population density of Senior Medical Officer (SMO) by DHB

FTE Senior Medical Officer (SMO) per 100,000 population

National average
96.9
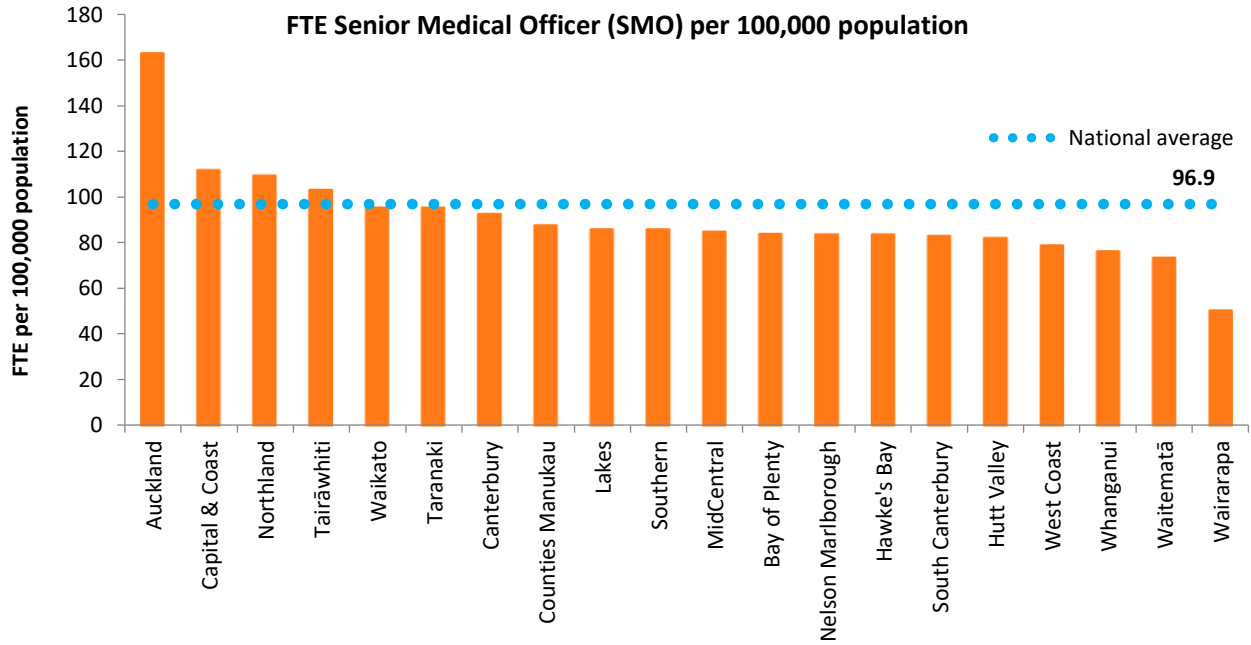
Figure 23: Population density of Resident Medical Officer (RMO) by DHB

FTE Resident Medical Officer (RMO) per 100,000 population

National average
87.1
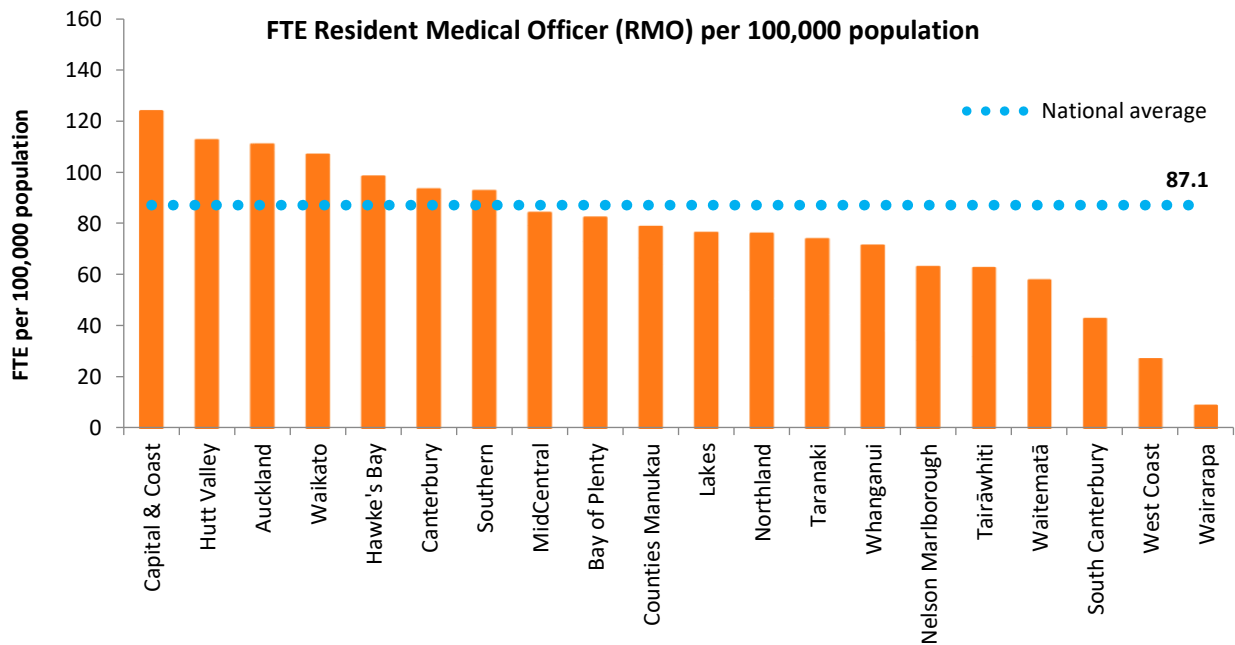
Figure 24: Population density of Midwives by DHB

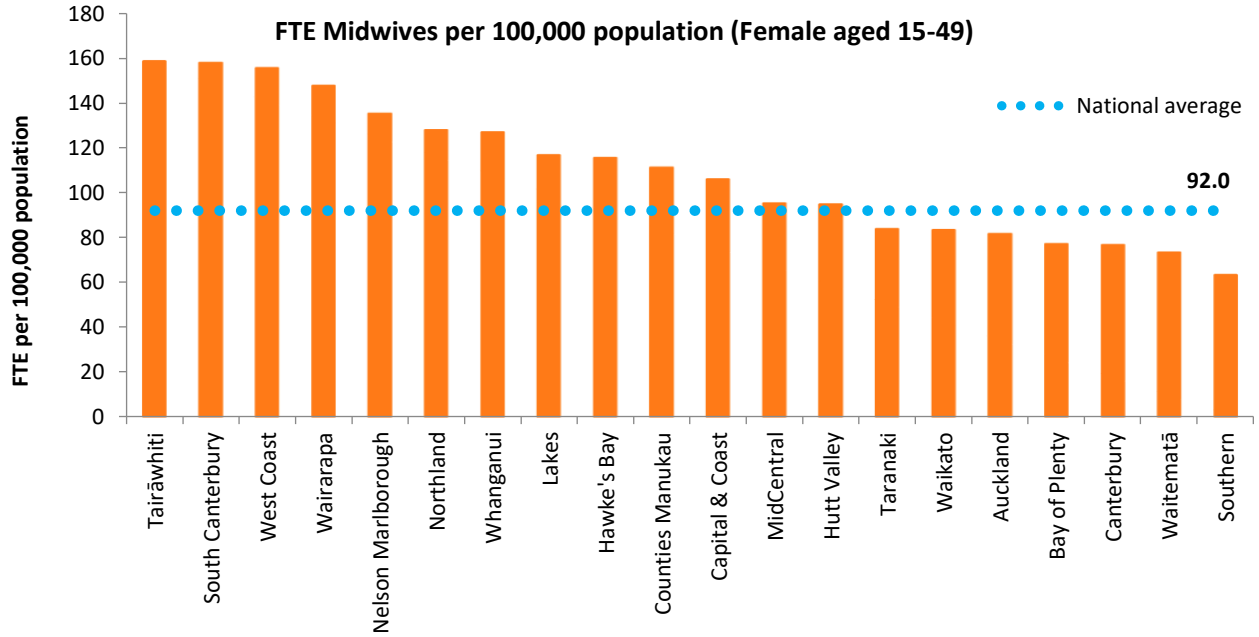FTE Midwives per 100,000 population (Female aged 15-49)

National average

92.0

Figure 25: Population density of all DHB staff by DHB

FTE All Staff per 100,000 population

National average

1330.6