Prepared by:

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DISTRICT HEALTH BOARD EMPLOYED WORKFORCE QUARTERLY REPORT

1 OCTOBER TO 31 DECEMBER 2019

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 October 2019 to 31 December 2019 and is a snapshot in time at 31 December 2019. 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 October 2019 to December 2019 inclusive and is a snapshot taken by the DHBs on 31 December 2019.

- 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 31 December 2019, 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 76,213*** 59,626 female 16,586 male	64,270 FTE 49,087 FTE* females 15,182 FTE* males	Largest occupation group: Nurses – 28,913 Smallest occupation group: Midwives – 1,508
DHB employee average age 45.2 years 45.4 years for females 44.8 years for males	Oldest male occupation group: SMO (mean age 51.5 years) Youngest male occupation group: RMO (mean age 30.7 years)	Oldest female occupation groups: Corporate and other (mean age 50.2 years) Youngest female occupation group: RMO (mean age 30.4 years)
Mean FTE rate 0.84 Mean FTE rate for females 0.82 Mean FTE rate for males 0.92	Longest Length of Service occupation group SMO (mean 10.2 years) Shortest Length of Service occupation group RMO (mean 1.1 years)	Employee reported ethnicities: Other** – 66.7% Asian – 20.9% Māori – 8.1% Pacific – 4.4%

*   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 less 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
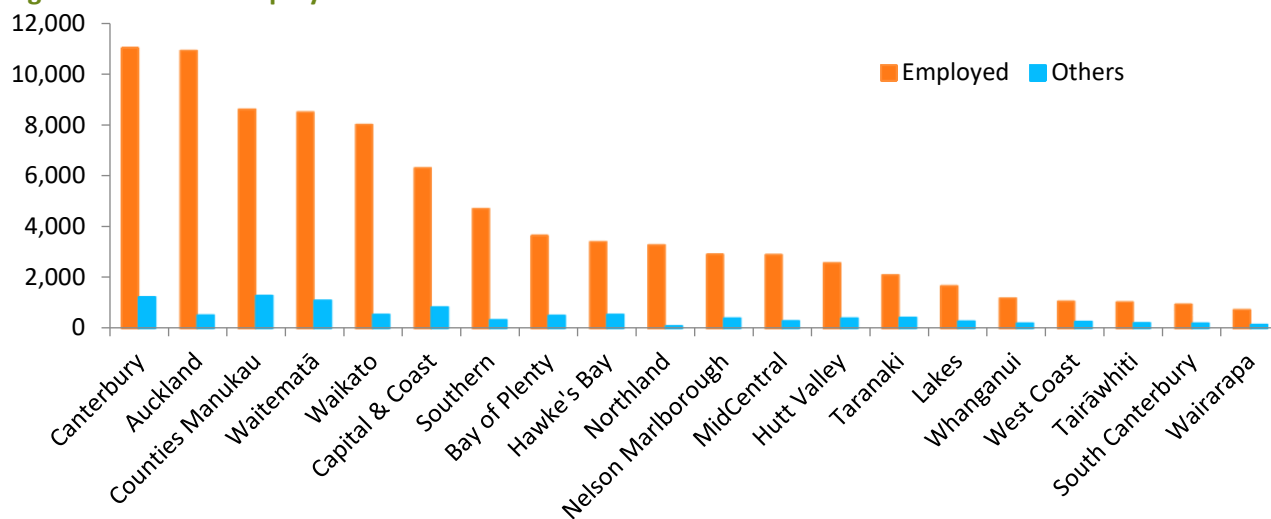
Table 1: Distribution of employment types

DHB	Employed	Others	Total	Proportion of DHB workforce
Canterbury	9,834	1,169	11,003	12.9%
Auckland	10,407	491	10,898	12.8%
Counties Manukau	7,367	1,222	8,589	10.1%
Waitematā	7,442	1,043	8,485	9.9%
Waikato	7,482	515	7,997	9.4%
Capital & Coast	5,498	796	6,294	7.4%
Southern	4,389	316	4,705	5.5%
Bay of Plenty	3,173	470	3,643	4.3%
Hawke's Bay	2,890	514	3,404	4.0%
Northland	3,194	78	3,272	3.8%
Nelson Marlborough	2,543	370	2,913	3.4%
MidCentral	2,620	279	2,899	3.4%
Hutt Valley	2,202	369	2,571	3.0%
Taranaki	1,700	398	2,098	2.5%
Lakes	1,416	257	1,673	2.0%
Whanganui	1,007	185	1,192	1.4%
West Coast	822	244	1,066	1.2%
Tairāwhiti	847	194	1,041	1.2%
South Canterbury	768	183	951	1.1%
Wairarapa	612	132	744	0.9%
Grand Total	**76,213**	**9,225**	**85,438**	**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	3,786	3,227.0	0.85	1,977	1,763.5	0.89	2,052	1,805.5	0.88	688	641.5	0.93	1,093	890.7	0.81	639	631.5	0.99	172	130.2	0.76
Bay of Plenty	1,263	963.9	0.76	645	566.0	0.88	469	398.3	0.85	321	263.4	0.82	234	192.8	0.82	190	189.1	1.00	51	35.0	0.69
Canterbury	3,661	3,027.4	0.83	2,173	1,892.8	0.87	1,671	1,376.4	0.82	1,044	826.9	0.79	594	499.4	0.84	570	559.7	0.98	121	79.2	0.65
Capital & Coast	2,259	1,804.8	0.80	1,147	1,044.7	0.91	726	619.2	0.85	406	354.3	0.87	431	339.2	0.79	408	394.0	0.97	121	84.5	0.70
Counties Manukau	2,791	2,367.8	0.85	1,363	1,163.3	0.85	1,157	1,000.9	0.87	794	697.7	0.88	570	479.5	0.84	476	466.6	0.98	216	159.3	0.74
Hawke's Bay	1,105	791.7	0.72	611	524.7	0.86	452	366.2	0.81	332	259.8	0.78	156	132.7	0.85	163	160.2	0.98	71	39.3	0.55
Hutt Valley	736	598.6	0.81	477	432.1	0.91	349	290.6	0.83	251	218.7	0.87	159	123.0	0.77	188	179.1	0.95	42	29.2	0.70
Lakes	548	427.3	0.78	321	286.5	0.89	188	157.9	0.84	127	104.4	0.82	98	86.7	0.89	93	92.7	1.00	41	30.8	0.75
MidCentral	1,062	878.1	0.83	635	582.0	0.92	360	320.9	0.89	187	156.5	0.84	166	147.6	0.89	153	151.2	0.99	57	38.6	0.68
Nelson Marlborough	838	614.2	0.73	571	471.7	0.83	358	266.5	0.74	475	329.7	0.69	156	124.8	0.80	96	94.8	0.99	49	31.9	0.65
Northland	1,246	936.6	0.75	607	521.3	0.86	475	401.0	0.84	458	343.8	0.75	201	192.2	0.96	138	135.7	0.98	69	42.3	0.61
South Canterbury	318	245.2	0.77	152	114.9	0.76	107	83.9	0.78	80	55.2	0.69	63	46.7	0.74	25	24.9	1.00	23	17.3	0.75
Southern	1,846	1,471.7	0.80	860	767.5	0.89	655	559.8	0.85	351	282.8	0.81	316	250.8	0.79	285	277.0	0.97	76	52.6	0.69
Tairāwhiti	328	261.0	0.80	199	181.5	0.91	116	96.7	0.83	95	79.2	0.83	63	55.8	0.89	27	26.6	0.99	19	14.5	0.76
Taranaki	641	493.0	0.77	386	342.3	0.89	241	196.0	0.81	187	156.7	0.84	128	107.8	0.84	89	87.7	0.99	28	20.7	0.74
Waikato	2,853	2,409.4	0.84	1,618	1,448.4	0.90	1,098	962.4	0.88	879	751.0	0.85	451	400.8	0.89	463	455.4	0.98	120	88.0	0.73
Wairarapa	271	188.5	0.70	136	111.8	0.82	70	50.2	0.72	68	47.0	0.69	30	25.4	0.85	17	16.4	0.96	20	12.5	0.62
Waitematā	2,611	2,207.3	0.85	1,341	1,167.9	0.87	1,346	1,114.9	0.83	1036	918.3	0.89	537	454.8	0.85	397	388.9	0.98	174	109.3	0.63
West Coast	324	273.2	0.84	200	167.1	0.84	88	77.7	0.88	149	106.4	0.71	35	27.6	0.79	12	11.6	0.96	14	9.9	0.71
Whanganui	427	344.5	0.81	207	185.6	0.90	137	114.0	0.83	115	94.3	0.82	51	45.8	0.90	46	45.8	1.00	24	18.6	0.77
Grand Total	28,913	23,530.08	0.81	15,627	13,736.5	0.88	12,115	10,259.2	0.85	8,043	6,687.6	0.83	5,533	4,625.1	0.84	4,474	4,388.1	0.98	1,508	1,043.0	0.69

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
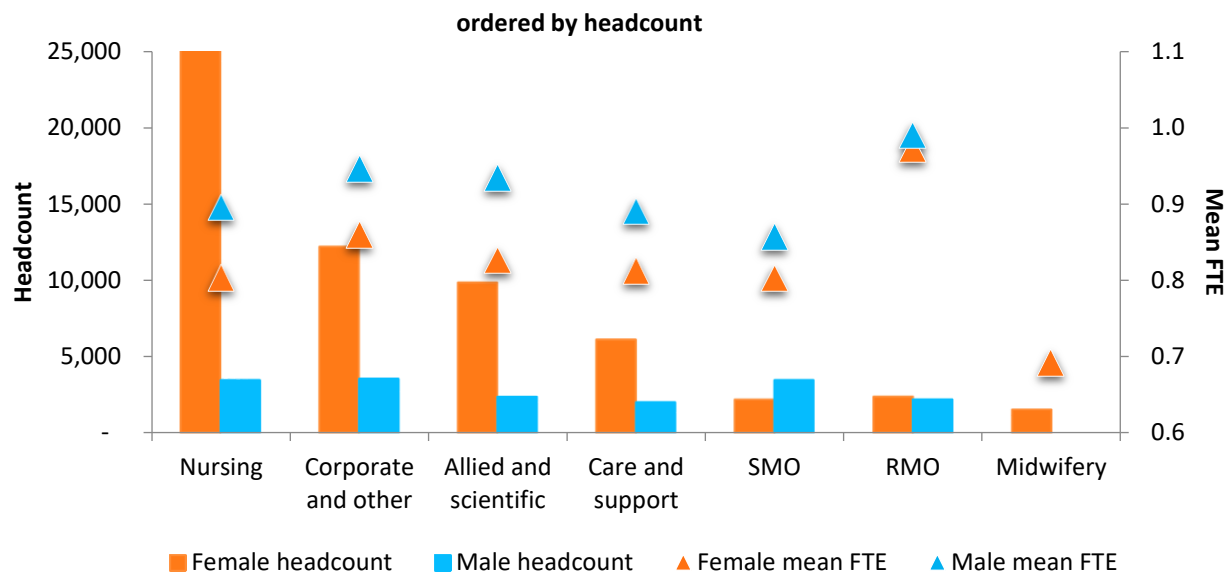
Table 3: Occupation group headcount and mean FTE by gender

Occupation group	Female		Male		Total	
	Headcount	Mean FTE	Headcount	Mean FTE	Headcount	Mean FTE
Nursing	25,533	0.80	3,380	0.90	28,913	0.81
Corporate and other	12,173	0.86	>3,450	0.95	15,627	0.88
Allied and scientific	9,820	0.83	2,295	0.93	12,115	0.85
Care and support	6,087	0.81	>1,950	0.89	8,043	0.83
SMO	>2,155	0.80	>3,370	0.86	5,533	0.84
RMO	2,347	0.97	2,127	0.99	4,474	0.98
Midwifery	>1,499	0.69	**	**	1,508	0.69
Grand Total	**59,626**	**0.82**	**>16,582**	**0.92**	**76,213**	**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
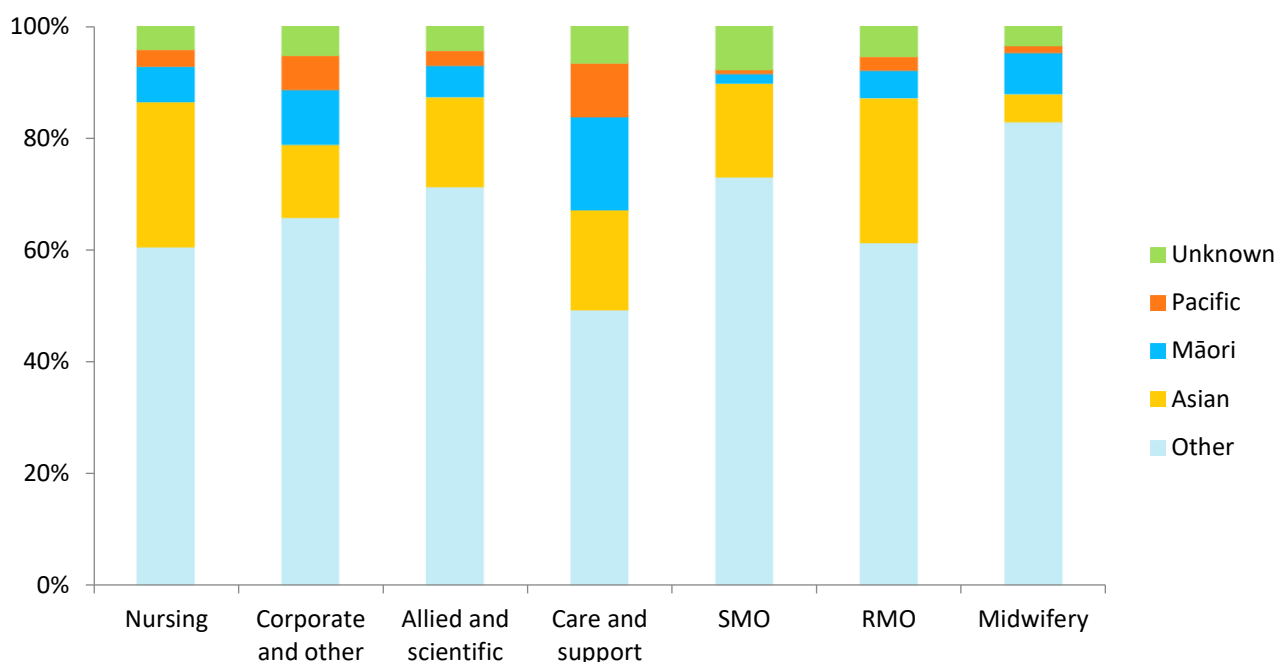
Table 4: Count and proportion of ethnicities by occupation group

Occupation group	Other*		Asian		Māori		Pacific		Unknown		Total
Nursing	17,476	60.4%	7,518	26.0%	1,836	6.3%	899	3.1%	1,184	4.1%	28,913
Corporate and other	10,272	65.7%	2,055	13.2%	1,537	9.8%	961	6.1%	802	5.1%	15,627
Allied and scientific	8,630	71.2%	1,944	16.0%	694	5.7%	333	2.7%	514	4.2%	12,115
Care and support	3,961	49.3%	1,447	18.0%	1,341	16.7%	776	9.6%	518	6.4%	8,043
SMO	4,039	73.0%	926	16.7%	99	1.8%	48	0.9%	421	7.6%	5,533
RMO	2,739	61.2%	1,159	25.9%	223	5.0%	117	2.6%	236	5.3%	4,474
Midwifery	1,249	82.8%	75	5.0%	112	7.4%	20	1.3%	52	3.4%	1,508
Grand Total	48,366	63.5%	15,124	19.8%	5,842	7.7%	3,154	4.1%	3,727	4.9%	76,213

* '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 72,486 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 31 December 2019.

Figure 4: Proportion of identifiable ethnicities for all DHB employees
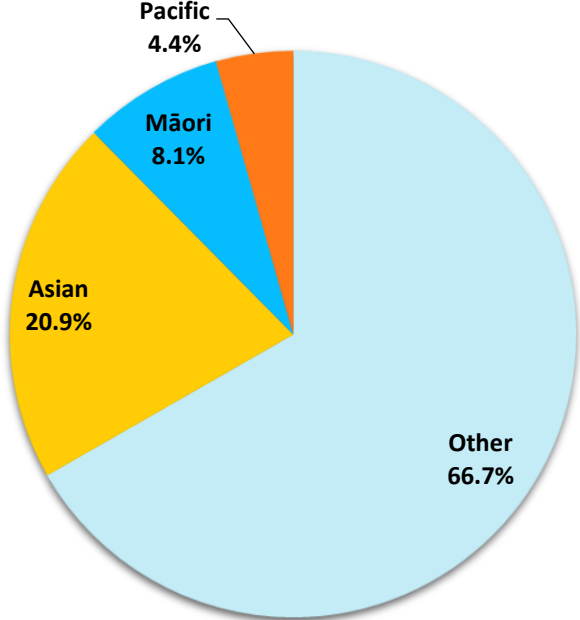

Pacific 4.4%
Māori 8.1%
Asian 20.9%
Other 66.7%

Figure 5: Proportion of identifiable ethnicities for projected population data at 31 December 2019

Pacific 6.5%
Māori 15.8%
Asian 15.5%
Other 62.2%
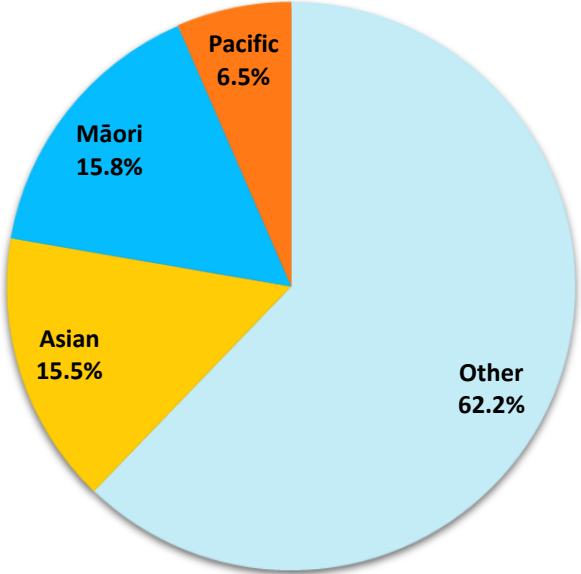
AGES AND LENGTH OF SERVICE

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.
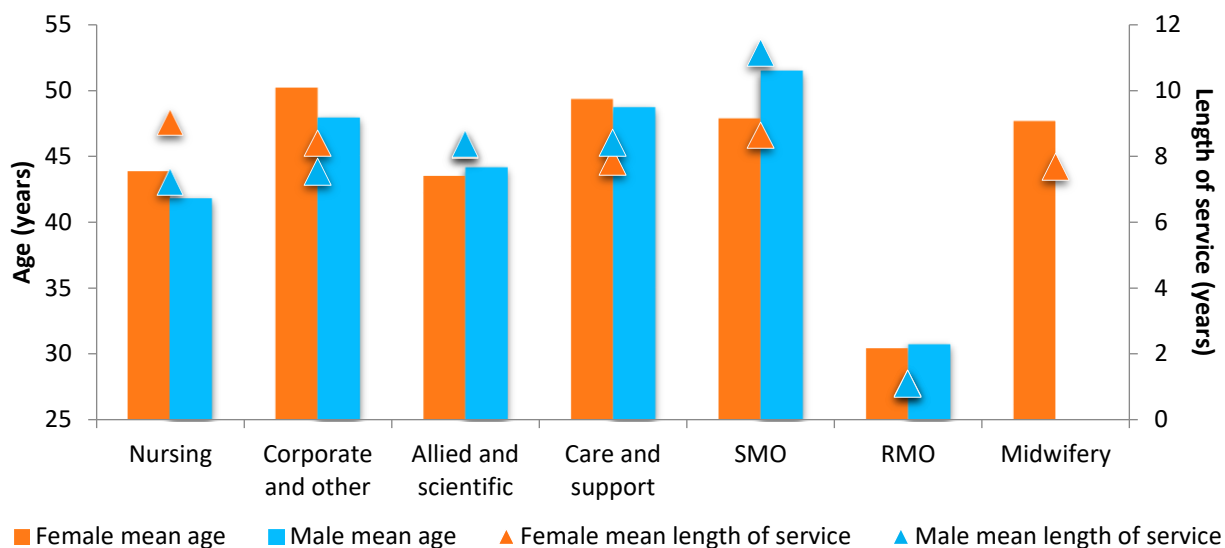
The following table gives the actual figures behind the chart above.

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	9.0	43.9	7.2	41.8	8.8	43.6
Corporate and other	8.4	50.2	7.5	47.9	8.2	49.7
Allied and scientific	8.3	43.5	8.4	44.2	8.3	43.6
Care and support	7.8	49.3	8.4	48.7	8.0	49.2
SMO	8.6	47.9	11.1	51.5	10.2	50.1
RMO	1.1	30.4	1.1	30.7	1.1	30.6
Midwifery	7.7	47.7	13.0	49.8	7.7	47.7
Grand Total	**8.3**	**45.4**	**7.6**	**44.8**	**8.2**	**45.2**

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.

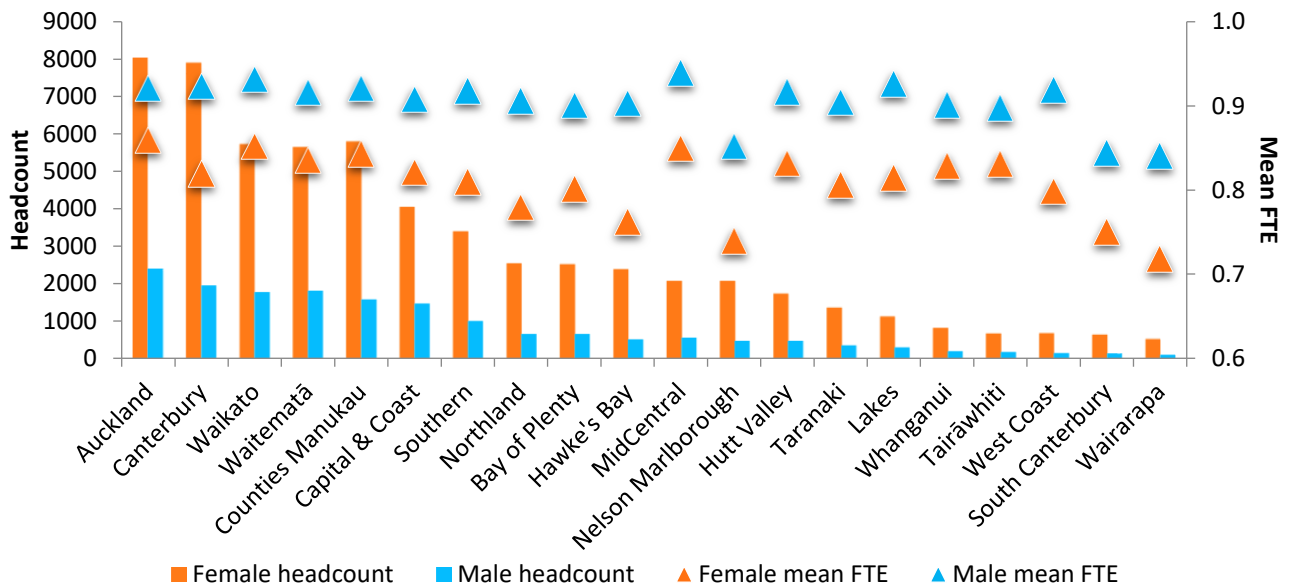**Figure 7: Headcount and mean FTE by gender and DHB**

Table 6: Headcount and mean FTE by gender and DHB

		Auckland	Canterbury	Waikato	Waitematā	Counties Manukau	Capital & Coast	Southern	Northland	Bay of Plenty	Hawke's Bay	MidCentral	Nelson Marlborough	Hutt Valley	Taranaki	Lakes	Whanganui	Tairāwhiti	West Coast	South Canterbury	Wairarapa
Female	Headcount	8,020	7,893	5,716	5,640	5,797	4,038	3,393	2,542	2,523	2,383	2,072	2,076	1,735	1,355	1,122	813	675	681	638	513
	Mean FTE	0.86	0.82	0.85	0.84	0.84	0.82	0.81	0.78	0.80	0.76	0.85	0.74	0.83	0.81	0.81	0.83	0.83	0.80	0.75	0.72
Male	Headcount	>2380	1,941	1,766	1,802	1,570	1,458	996	652	650	507	548	467	467	345	294	194	172	141	130	99
	Mean FTE	0.92	0.92	0.93	0.92	0.92	0.91	0.92	0.91	0.90	0.90	0.94	0.85	0.92	0.90	0.93	0.90	0.90	0.92	0.84	0.84
Total	Headcount	10,407	9,834	7,482	7,442	7,367	5,496	4,389	3,194	3,173	2,890	2,620	2,543	2,202	1,700	1,416	1,007	847	822	768	612
	Mean FTE	0.87	0.84	0.87	0.85	0.86	0.84	0.83	0.81	0.82	0.79	0.87	0.76	0.85	0.83	0.84	0.84	0.84	0.82	0.77	0.74

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.

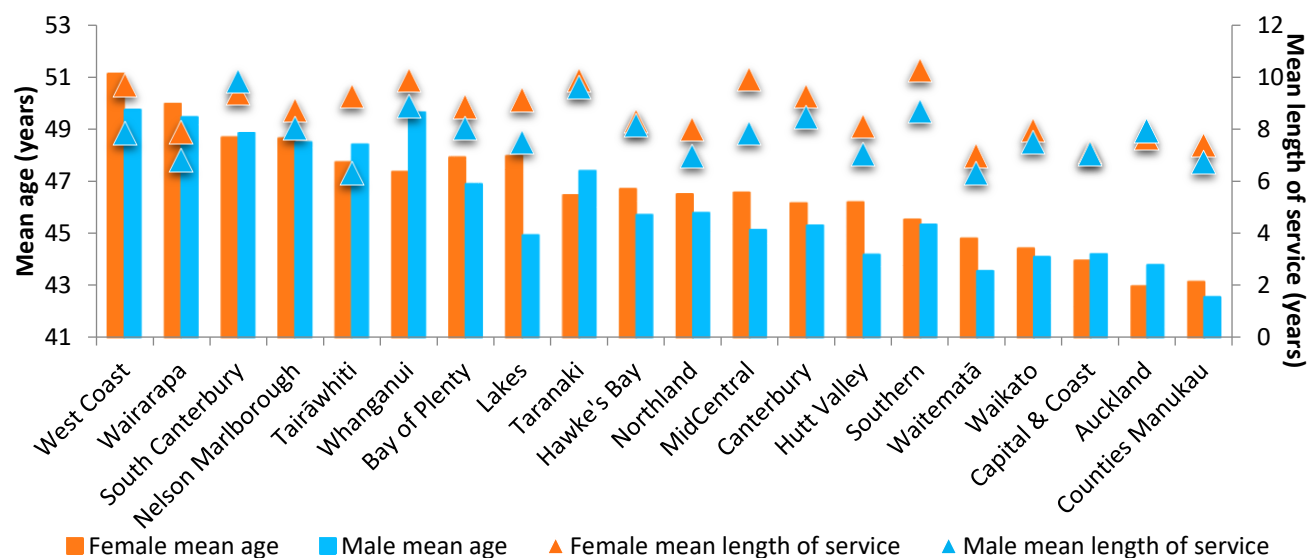**Figure 8: Mean ages and mean length of service by DHB and gender**

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	9.7	51.1	7.8	49.7	9.4	50.9
Wairarapa	7.9	50.0	6.8	49.4	7.7	49.9
South Canterbury	9.4	48.7	9.8	48.8	9.5	48.7
Nelson Marlborough	8.7	48.6	8.1	48.5	8.6	48.6
Tairāwhiti	9.3	47.7	6.3	48.4	8.7	47.9
Whanganui	9.9	47.4	8.9	49.6	9.7	47.8
Bay of Plenty	8.9	47.9	8.1	46.9	8.7	47.7
Lakes	9.1	48.0	7.5	44.9	8.8	47.3
Taranaki	9.9	46.5	9.6	47.4	9.8	46.7
Hawke's Bay	8.3	46.7	8.1	45.7	8.3	46.5
Northland	8.0	46.5	6.9	45.8	7.8	46.4
MidCentral	9.9	46.6	7.9	45.1	9.5	46.3
Canterbury	9.3	46.2	8.5	45.3	9.1	46.0
Hutt Valley	8.1	46.2	7.0	44.2	7.9	45.8
Southern	10.3	45.5	8.7	45.3	9.9	45.5
Waitematā	7.0	44.8	6.3	43.5	6.8	44.5
Waikato	8.0	44.4	7.5	44.1	7.9	44.3
Capital & Coast	7.1	44.0	7.1	44.2	7.1	44.0
Auckland	7.6	43.0	7.9	43.8	7.7	43.1
Counties Manukau	7.4	43.1	6.7	42.6	7.2	43.0
Grand Total	**8.3**	**45.4**	**7.6**	**44.8**	**8.2**	**45.2**

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.

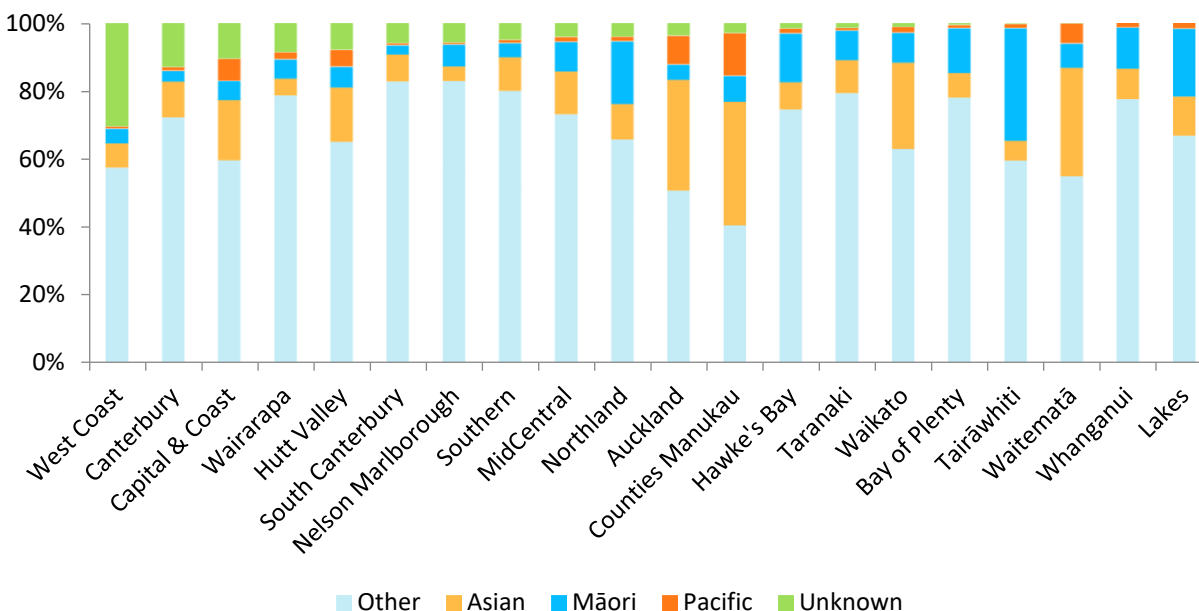**Figure 9: Proportion of reported ethnicities by DHB**

Table 8: Distribution of reported ethnicities by DHB

DHB	Other*	Asian	Māori	Pacific	Unknown	Total
West Coast	473	61	<38	**	249	822
Canterbury	7,113	1,047	306	106	1,262	9,834
Capital & Coast	3,282	986	306	352	572	5,498
Wairarapa	482	31	35	12	52	612
Hutt Valley	1,434	355	135	105	173	2,202
South Canterbury	636	62	<25	**	45	768
Nelson Marlborough	2,108	115	165	12	143	2,543
Southern	3,513	446	175	38	217	4,389
MidCentral	1,917	337	224	35	107	2,620
Northland	2,100	342	587	39	126	3,194
Auckland	5,294	3,403	459	864	387	10,407
Counties Manukau	2,996	2,688	555	915	213	7,367
Hawke's Bay	2,154	238	413	39	46	2,890
Taranaki	1,349	170	145	12	24	1,700
Waikato	4,714	1,909	656	118	85	7,482
Bay of Plenty	2,477	237	415	26	18	3,173
Tairāwhiti	505	51	279	<15	**	847
Waitematā	4,091	2,387	528	430	6	7,442
Whanganui	781	93	121	12	0	1,007
Lakes	947	166	282	21	0	1,416
Grand Total	**48,366**	**15,124**	**5,842**	**3,154**	**3,727**	**76,213**

* '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
Southern	11.3	9.9	9.5	9.1	10.7	2.1	8.4	9.9
Taranaki	10.7	10.3	10.4	10.4	7.9	1.1	10.2	9.8
Whanganui	10.1	9.8	10.8	9.9	10.5	0.8	10.3	9.7
MidCentral	10.9	9.4	9.2	8.0	10.9	1.3	10.0	9.5
South Canterbury	10.5	9.1	8.9	11.2	8.5	0.7	6.8	9.5
West Coast	10.2	7.7	9.8	10.6	6.8	0.9	11.2	9.4
Canterbury	10.4	7.7	9.7	9.2	11.1	2.0	10.1	9.1
Lakes	10.1	9.1	9.1	8.9	8.1	1.2	6.6	8.8
Bay of Plenty	10.0	9.2	8.0	7.4	9.7	1.2	8.4	8.7
Tairāwhiti	10.7	7.8	7.8	8.0	7.8	0.5	5.7	8.7
Nelson Marlborough	10.0	7.3	8.1	9.2	10.3	1.1	6.7	8.6
Hawke's Bay	8.9	8.5	9.0	7.5	10.7	1.3	7.4	8.3
Hutt Valley	9.2	8.2	7.6	8.4	9.5	0.5	7.3	7.9
Waikato	8.5	8.3	8.1	6.8	10.1	1.7	6.4	7.9
Northland	8.4	9.0	8.7	5.4	8.8	1.2	7.4	7.8
Auckland	7.6	7.9	8.1	9.1	10.7	0.6	7.2	7.7
Wairarapa	8.6	6.3	9.0	7.1	9.4	0.4	5.7	7.7
Counties Manukau	7.3	8.3	7.0	7.4	10.3	0.4	7.6	7.2
Capital & Coast	7.3	7.2	7.1	8.7	10.1	0.9	7.4	7.1
Waitematā	6.8	7.1	7.6	6.3	9.8	0.5	7.0	6.8
Grand Total	**8.8**	**8.2**	**8.3**	**8.0**	**10.2**	**1.1**	**7.7**	**8.2**

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 Lakes shows that (if the December quarter is indicative) 50% of staff would have taken 32 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 80 hours or less of sick leave per FTE over the course of a year.

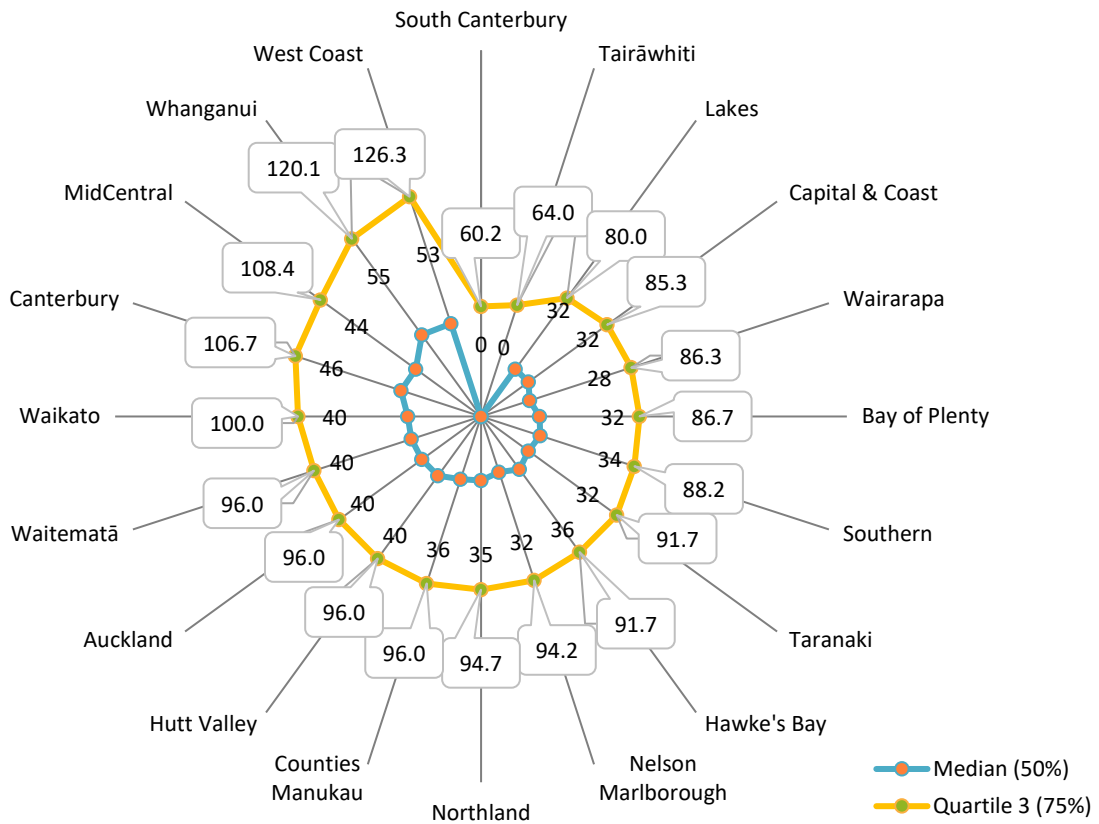**Figure 10: Average annualised sick leave hours per FTE by DHB**

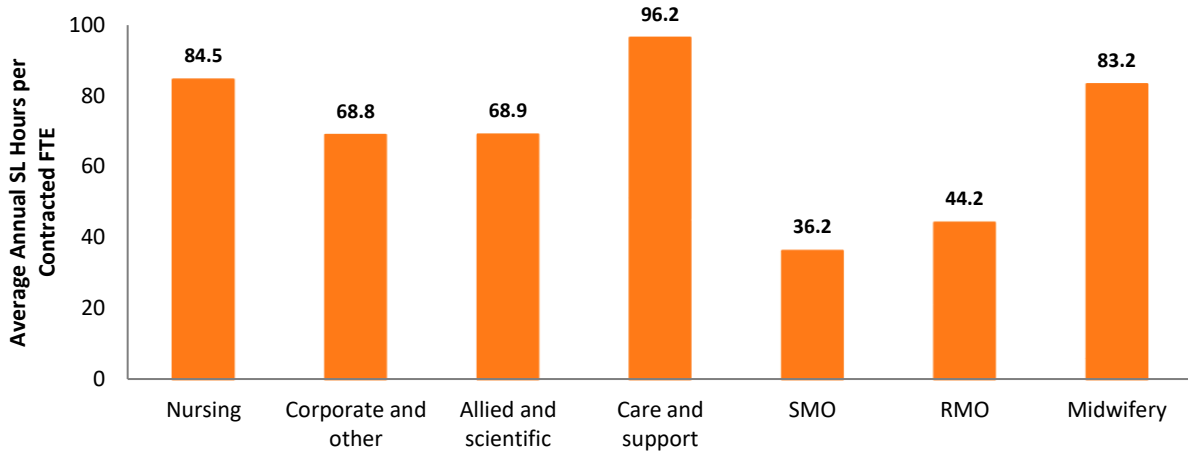**Figure 11: Average annual sick leave hours per FTE by occupational group**

Average Annual SL Hours per Contracted FTE

Occupational group	Hours
Nursing	84.5
Corporate and other	68.8
Allied and scientific	68.9
Care and support	96.2
SMO	36.2
RMO	44.2
Midwifery	83.2

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

Average Annual SL Hours per Contracted FTE

Age group	F	M
<25	85.3	80.1
25-34	83.3	68.0
35-44	78.5	58.1
45-54	72.9	55.9
55-64	75.0	60.5
>=65	90.4	69.0

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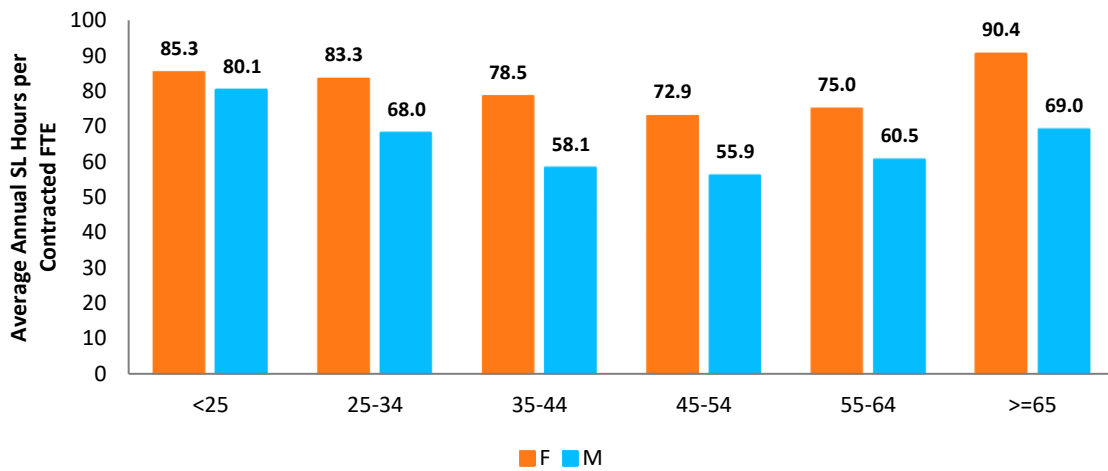
Figure 13: Average annual sick leave hours per FTE by ethnicity by gender

Average Annual SL Hours per Contracted FTE

Ethnicity	F	M
Other	74.5	53.5
Asian	81.2	68.2
Maori	89.4	75.8
Pacific	98.8	96.7

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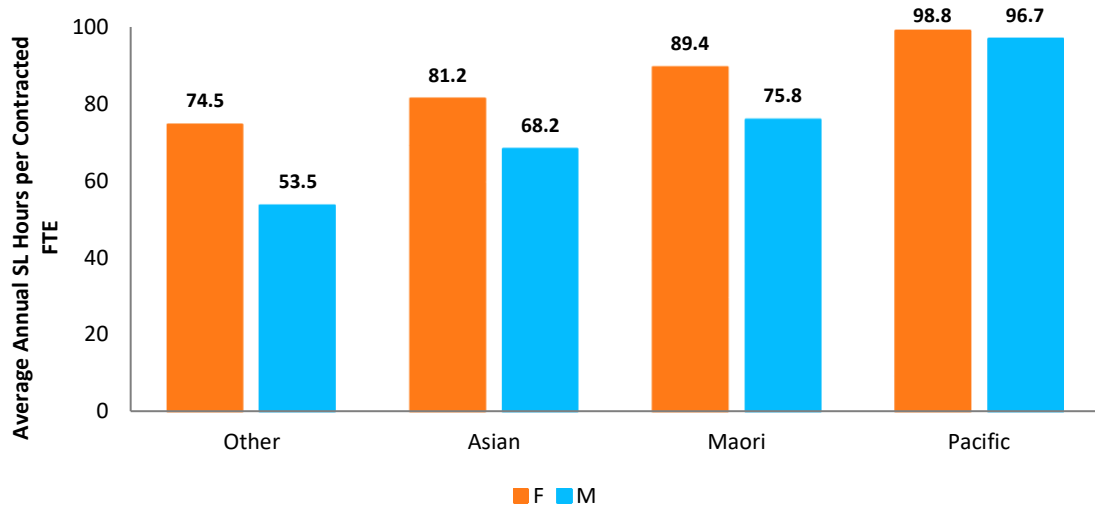
RATIO OF ANNUAL LEAVE BALANCE AND ANNUAL LEAVE ENTITLEMENT BY DHB, OCCUPATION GROUP AND ETHNICITY BY GENDER

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 nine 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).

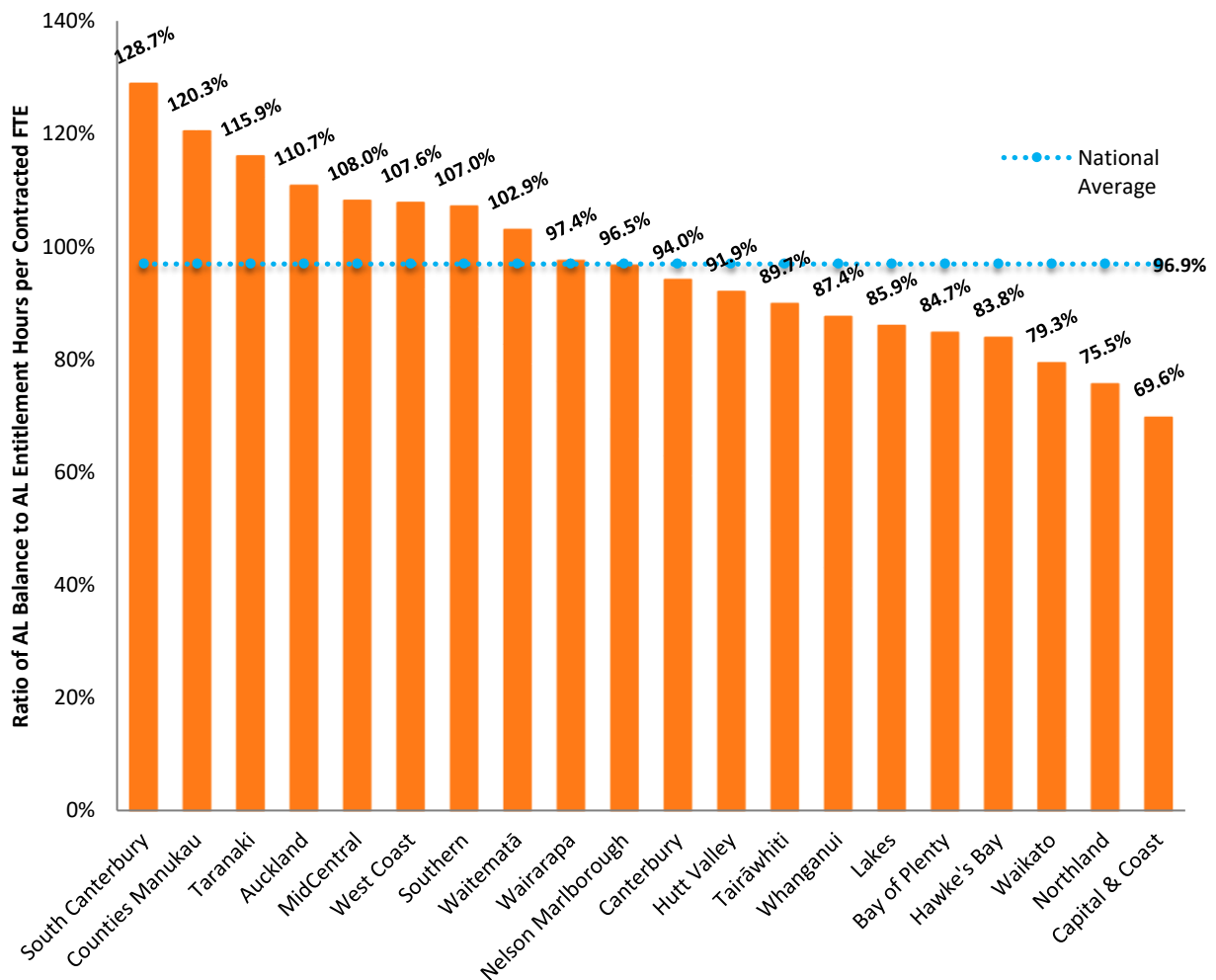**Figure 14: Ratio of annual leave balance to annual leave entitlement hours per FTE by DHB**

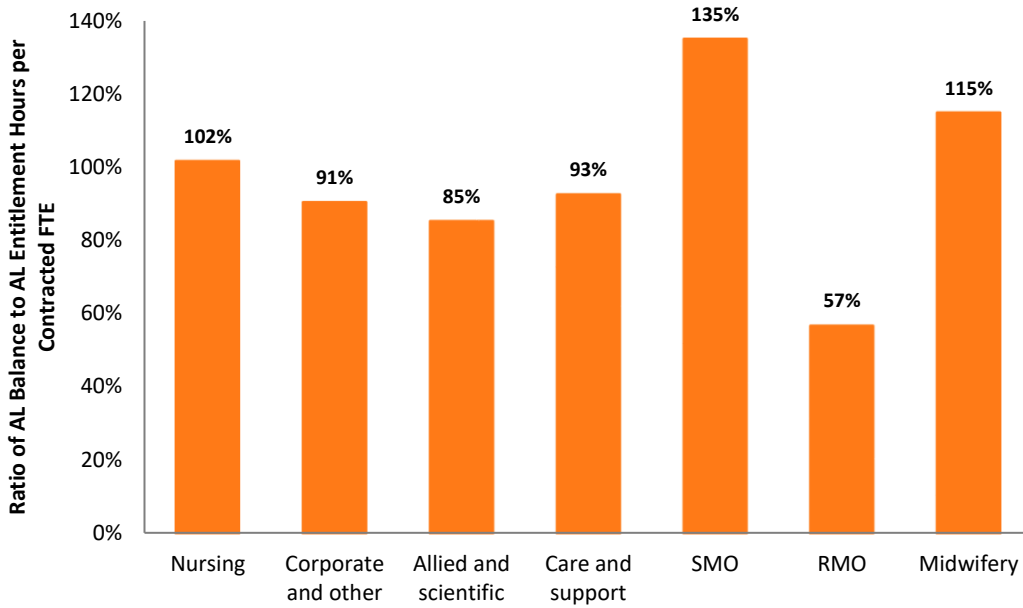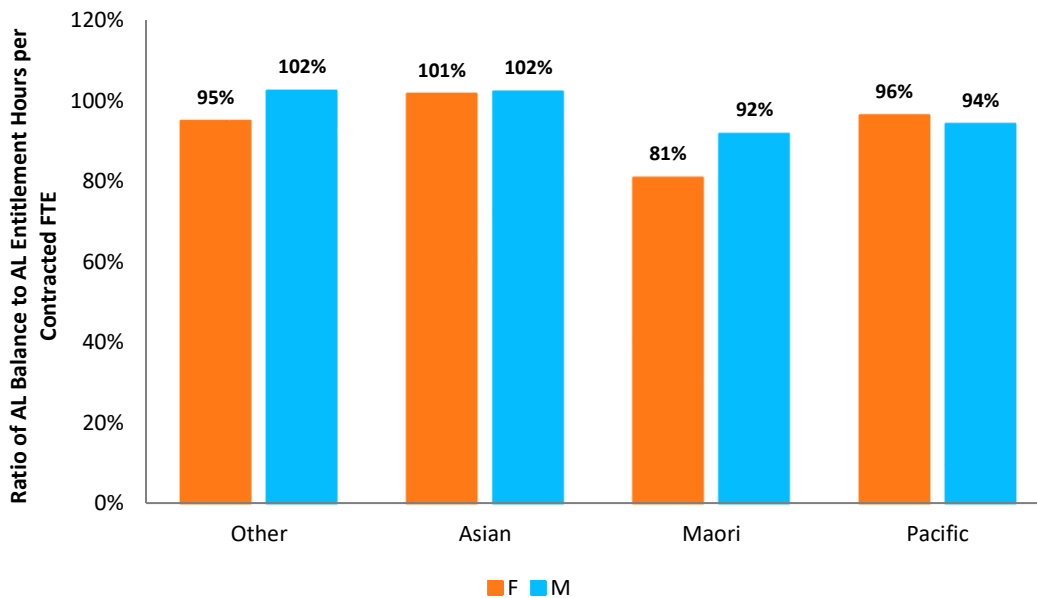**Figure 15: Ratio of annual leave balance to annual leave entitlement hours per FTE by occupational group**

Bar chart, y-axis "Ratio of AL Balance to AL Entitlement Hours per Contracted FTE" (0% to 140%):

- Nursing: 102%
- Corporate and other: 91%
- Allied and scientific: 85%
- Care and support: 93%
- SMO: 135%
- RMO: 57%
- Midwifery: 115%

Figure 16: Ratio of annual leave balance to annual leave entitlement hours per FTE by ethnicity by gender

Bar chart, y-axis "Ratio of AL Balance to AL Entitlement Hours per Contracted FTE" (0% to 120%), F (orange) and M (blue):

- Other: F 95%, M 102%
- Asian: F 101%, M 102%
- Maori: F 81%, M 92%
- Pacific: F 96%, M 94%

F M

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 December 2019 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
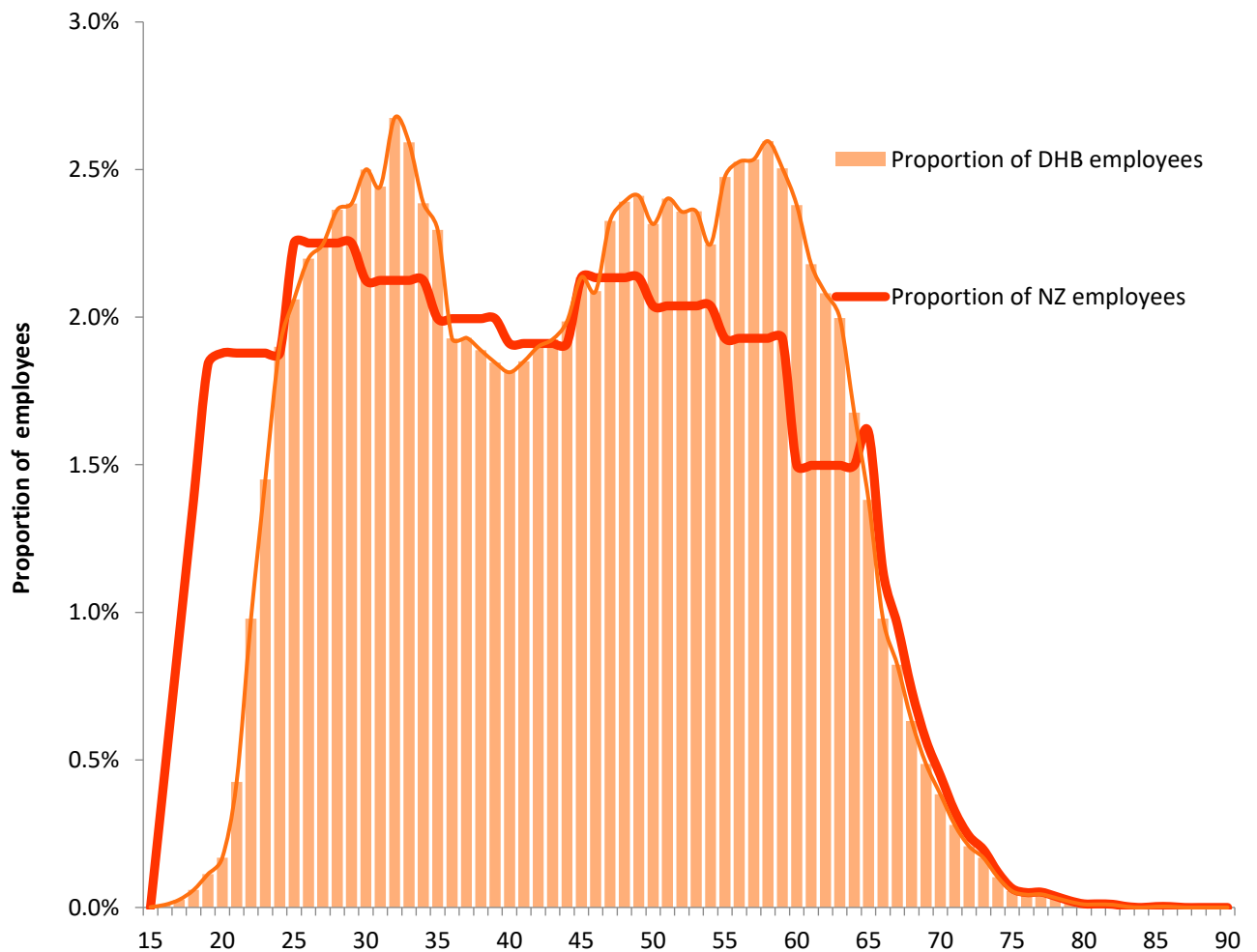
# ETHNIC REPRESENTATION OF WORKFORCE TO RESIDENT POPULATION

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 95.1 percent, compared to 86.6 percent in December 2014.

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 -26% to +26% - so comparisons between DHBs are possible. The data for 2014 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 West Coast has less 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.
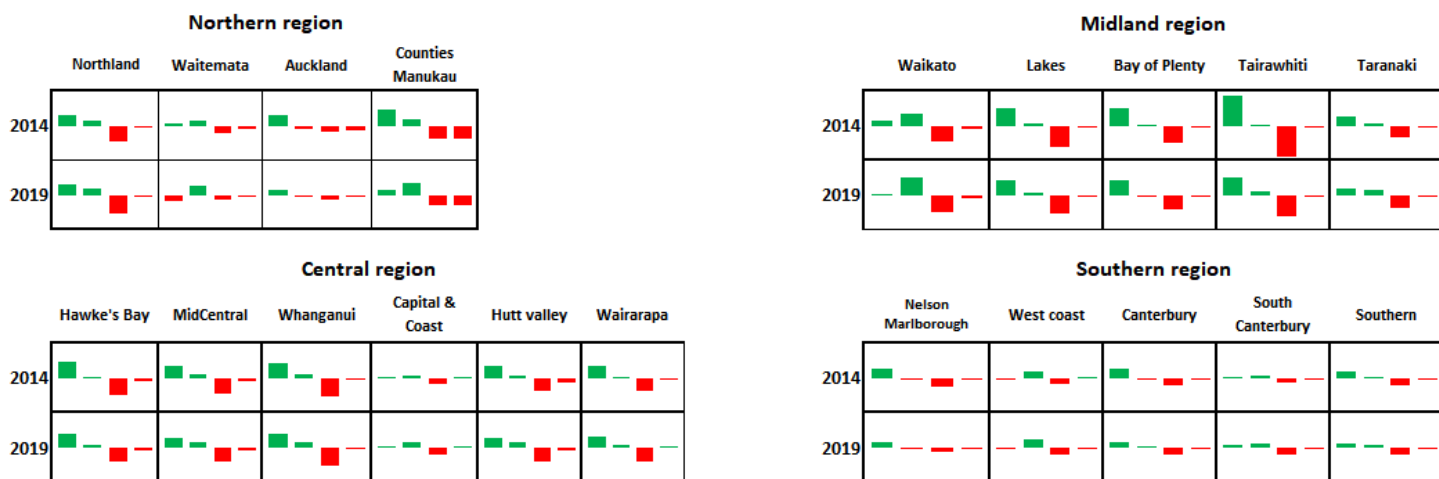
Note: The four bars are ordered as: Other, Asian, Māori and Pacific

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 2014 and 2019; the 'Other' ethnicities have reduced closer to zero (from nine down to five 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.

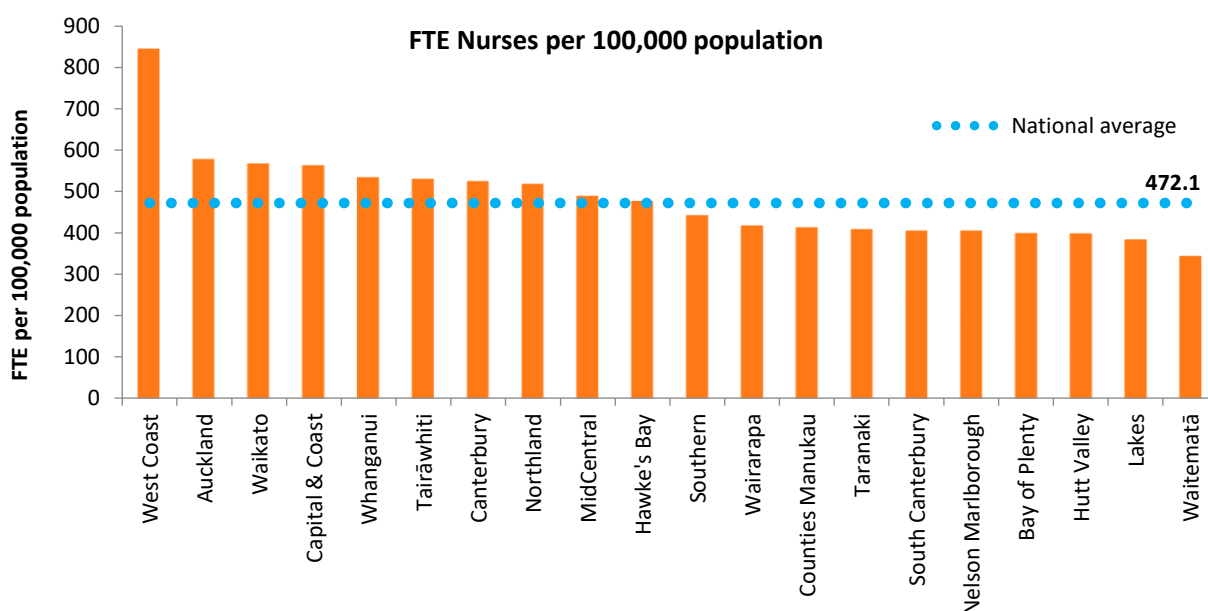**Figure 18: Population density of Nurses by DHB**

FTE Nurses per 100,000 population

Figure 19: Population density of Corporate & Other by DHB

FTE Corporate & Other per 100,000 population
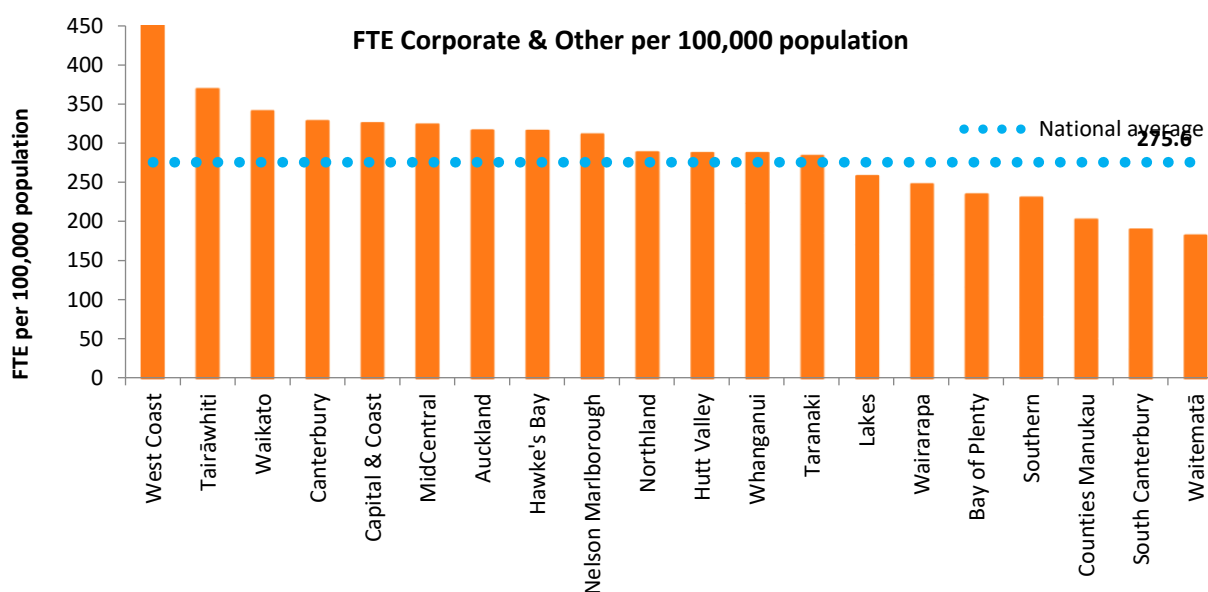
Figure 20: Population density of Allied & Scientific by DHB

FTE Allied & Scientific per 100,000 population

National average

205.8
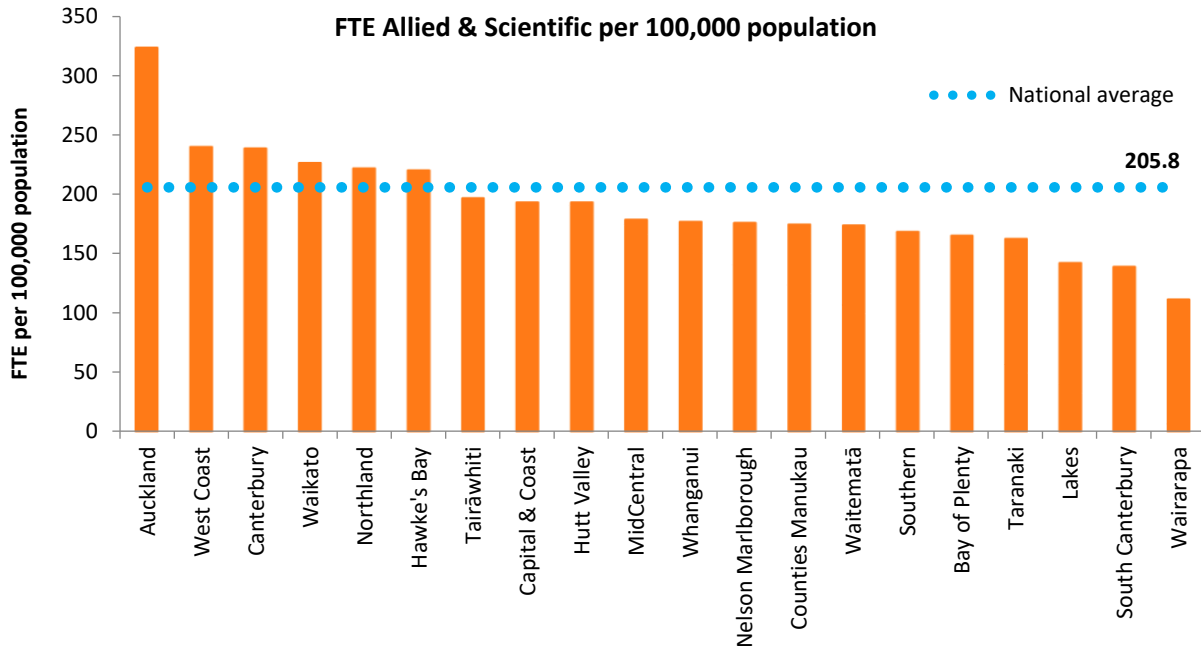
Figure 21: Population density of Care & Support by DHB

FTE Care & Support per 100,000 population

National average

134.2
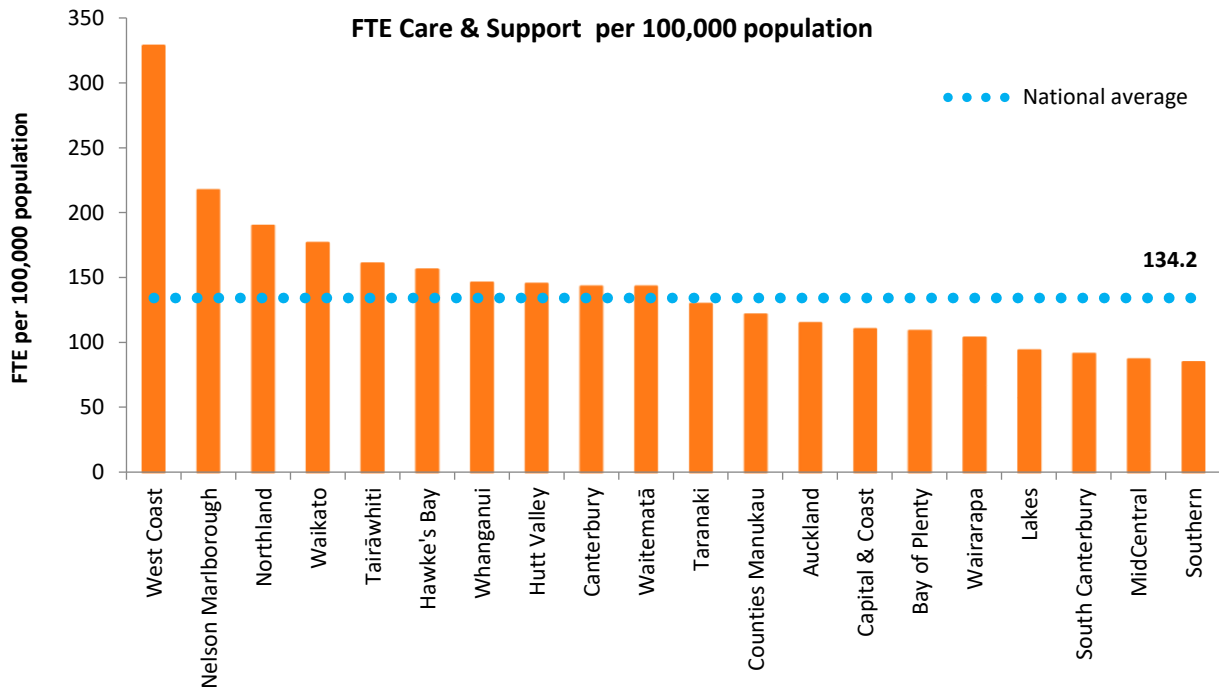
Figure 22: Population density of Senior Medical Officer (SMO) by DHB

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

National average — 92.8

Y-axis: FTE per 100,000 population

DHBs (left to right): Auckland, Tairawhiti, Northland, Capital & Coast, Waikato, Taranaki, Canterbury, West Coast, Counties Manukau, Nelson Marlborough, MidCentral, Hutt Valley, Bay of Plenty, Hawke's Bay, Lakes, South Canterbury, Southern, Whanganui, Waitemata, Wairarapa

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

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

National average — 88.0

Y-axis: FTE per 100,000 population

DHBs (left to right): Capital & Coast, Hutt Valley, Auckland, Waikato, Canterbury, Hawke's Bay, MidCentral, Lakes, Southern, Counties Manukau, Bay of Plenty, Northland, Taranaki, Whanganui, Nelson Marlborough, Waitematā, Tairāwhiti, South Canterbury, Wairarapa, West Coast

Figure 24: Population density of Midwives by DHB
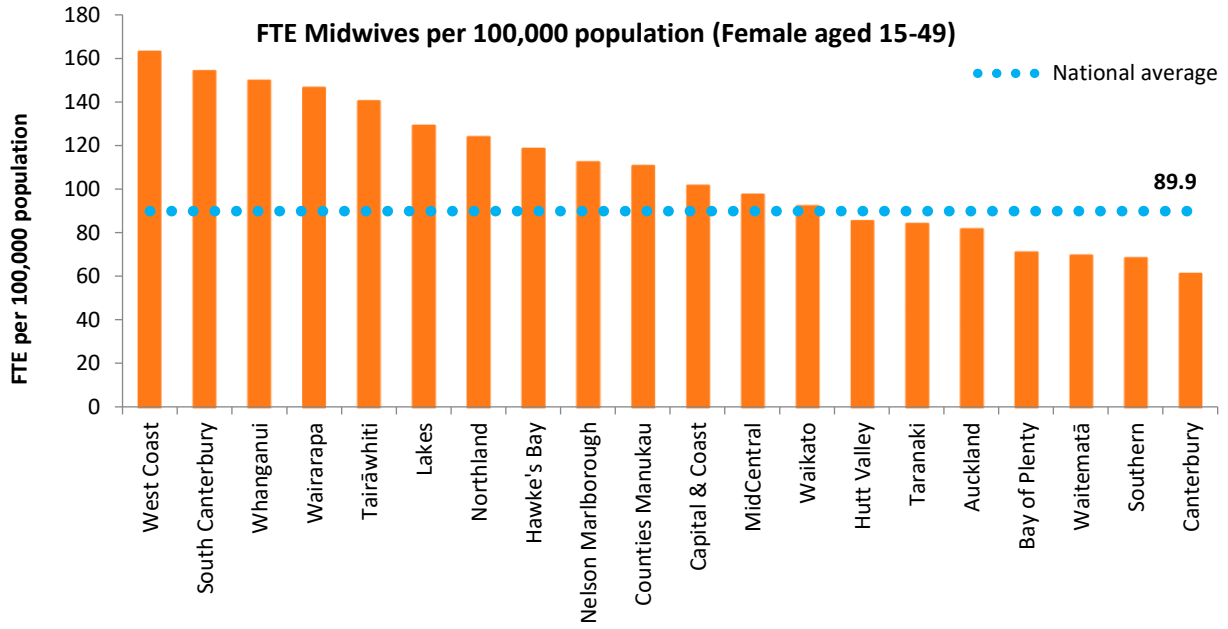

FTE Midwives per 100,000 population (Female aged 15-49)

Figure 25: Population density of all DHB staff by DHB

FTE All Staff per 100,000 population