

MORE THAN
NUMBERS



DHB adult mental health and addiction workforce

2018 provider
arm services

Te Pou o te
Whakaaro Nui

Matua Raki
National Addiction Workforce Development

The *More than numbers* project aims to collate, analyse and publish information about the New Zealand workforce delivering mental health and addiction services to adults (people aged 18 years and older).

The 2018 series of *More than numbers* reports provide information about the workforce delivering secondary care alcohol and other drug services and mental health services in DHBs, NGOs and across both provider groups. More information and reports are available from the Te Pou o te Whakaaro Nui website.

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Abbreviations

ANZSCO	Australia and New Zealand Standard Classification of Occupations
AOD	Alcohol and other drug
CAMHS	Child and adolescent mental health and addiction services
DHB	District health board
HWIP	Health Workforce Information Programme
MHSOP	Mental health services for older people
MOH	Ministry of Health
NGO	Non-government organisation
OECD	Organisation for Economic Co-operation and Development
PAOW	Primary area of work
PRIMHD	Programme for Integration of Mental Health Data

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Executive summary

Mental health and addiction services are provided by district health boards (DHBs), non-government organisations (NGOs), primary healthcare organisations, and other services such as schools, social services and prisons. Services are funded by a range of government sectors and may also be funded privately or by philanthropic organisations.

Within the health sector, DHBs employ around 60 per cent of the secondary care mental health and addiction workforce delivering services to people aged 18 years and older (adults). This workforce delivers services to people in DHB inpatient facilities and to people living in the community.

This report supports workforce planning and development by estimating the size and composition of the 2018 DHB workforce in alcohol and other drug (AOD); forensic mental health; and mental health services for adults. This includes DHB dedicated mental health services for older people (MHSOP).

Method

This report is based on data collected on the DHB employed workforce through the Health Workforce Information Programme (HWIP). This includes full-time equivalent (FTE) employed workforce in the mental health and addiction primary area of work (PAOW) and FTEs vacant as at 31 March 2018. The workforce in child and youth mental health and addiction services (CAMHS) obtained from Werry Workforce Whāraurau (2017).¹ This was subtracted from the overall DHB employed workforce information provided by HWIP, to estimate the size and composition of the DHB mental health and addiction workforce for adults. Mental health and addiction expenditure for 2016/17, provided by the Ministry of Health, was used to estimate the distribution of workforce across AOD; forensic mental health; and mental health services.

Results

The DHB adult mental health and addiction workforce was estimated to be 6,603 FTE positions (employed and vacant), with a vacancy rate of 6 per cent. This is made up of the adult AOD workforce estimated to comprise 9 per cent of the overall workforce (621 FTEs); adult forensic mental health workforce 15 per cent (988 FTEs); and adult mental health workforce made up 76 per cent (4,993 FTEs).

Nearly three-quarters (73 per cent) of the mental health and addiction workforce was in clinical roles; non-clinical roles comprised 15 per cent; and administration and management roles 12 per cent. Nurses were the largest occupation group (46 per cent), followed by allied health workers (17 per cent) and support workers (15 per cent).

¹ Workforce data from 2016 was used as the Werry Workforce Whāraurau were still to confirm final figures for 2018 child and adolescent mental health and addiction workforce at the time of writing this report.

The structure of the AOD workforce differed from forensic and mental health services. Allied health roles comprised nearly half (47 per cent) of the AOD workforce. In contrast, these roles made up around 12 to 14 per cent of the forensic and mental health workforces.

Workforce turnover in DHB mental health and addiction services (including CAMHS, adult and MHSOP) was just over 12 per cent. In the previous year, all occupation groups were recruited at higher rates than resignations, although for some like support workers and administration and management roles the increase was minimal.

Discussion

The estimated DHB adult mental health and addiction workforce appears to have grown by approximately 9 per cent since 2014,² to 6,603 FTEs (employed and vacant) in 2018. The workforce turnover for the year ended 31 March 2018 indicates that around two-thirds of this growth occurred prior to March 2017.

Over the past 4 years, funding for DHB services has exceeded population growth, but has not offset the full cost of wage inflation and other costs of delivering services to more people. The DHB provider arm workforce per 100,000 adult population is roughly the same as in 2014.³ However, the workforce per 10,000 people seen by DHB adult mental health and addiction services decreased by 5 per cent from 630 FTEs per 10,000 adults seen, to 601 FTEs.⁴

Compared to 2014, the FTE AOD workforce decreased in size by 6 per cent. However, this decrease may be due to some common mental health roles being overestimated in the previous workforce survey (Te Pou o te Whakaaro Nui, 2015b). The estimated forensic mental health workforce grew by 5 per cent compared to 2014. The estimated mental health workforce grew by 12 per cent.

The different methods used for data collection and estimation means that the workforce composition in 2014 and 2018 is not directly comparable. Different naming conventions may be responsible for large differences in the distribution of workforce within occupation groups such as medical practitioners and administration and management.

The main change in the workforce between 2014 and 2018, was a slight reorientation towards more non-clinical roles; up from 11 per cent of the workforce in 2014 to 15 per cent in 2018. This was accompanied by a slight decrease in nurses and allied health workers share of the workforce. The

² Including the findings for DHB provider arm services of the 2014 *More than numbers* organisation workforce survey (5,656 FTEs) plus the 2010 Te Pou survey of DHB dedicated MHSOP workforce (403 FTEs), (Te Pou o te Whakaaro Nui, 2011, 2015b).

³ Based on population estimates for people aged 20 years and older provided by Statistics New Zealand (2017), see Appendix D (Table 18).

⁴ Based on 2013 service use information published by the Ministry of Health, see footnote 19 on page 25; and 2017 service use information provided by the Ministry of Health, PRIMHD extract 9 April 2018, formatted by Te Pou.

FTE workforce for enrolled nurses has also grown substantially, albeit this remains a small proportion of the workforce overall.

The DHB adult mental health and addiction workforce resignation rate (12 per cent) was low compared to that of NGOs (23 per cent) and New Zealand's average turnover across all industries (19 per cent), (Lawson Williams, 2017; Te Pou o te Whakaaro Nui, 2018). However, DHB mental health and addiction employee turnover was similar to the FTE turnover for all DHB employees in 2017 (Te Pou o te Whakaaro Nui, 2017a). Turnover was particularly low over the past year for medical practitioners (excluding resident medical officers) and nurses.

Utility of HWIP DHB employed workforce data

This report provides a snapshot of the DHB adult mental health and addiction workforce based on information from the DHB employed workforce held by HWIP and other sources. It shows this data can provide credible results for services by occupation groups and some role groups, such as registered nurses and allied health roles like social workers and occupational therapists. Crucial identifiers in the DHB employed workforce supporting these results are the PAOW code for DHB mental health and addiction employees and the Australia and New Zealand Standard Classification of Occupations (ANZSCO) role codes. It is anticipated that as the accuracy of PAOW coding for services improves over time, the need for estimation of the workforce by service groups will reduce.

PAOW coding for mental health and addiction services does not currently specify the setting in which services are delivered (inpatient or community); although mental health and addiction expenditure indicates this is unlikely to have substantially changed since 2014. It would be useful to see the workforce in inpatient services separate from those delivering services in the community, for workforce planning purposes.

ANZSCO role coding in the DHB employed workforce provides useful information for understanding the composition of the workforce, as it spans across DHBs. Some key workforce roles are not currently reflected in ANZSCO codes, such as peer support roles (both consumer and whānau-focused roles) and advanced peer workforce roles like peer advisors. The development of new ANZSCO codes or dedication of existing codes would help to identify the size and growth of these workforces in the DHB provider arm.

Limitations

This report is intended to describe the DHB mental health and addiction workforce in services for adults, including dedicated MHSOP. It does not include mental health and addiction specialists employed by other DHB services such as physical health services, emergency departments, and health services for older people.

The workforce size and composition in mental health and addiction services has been estimated by combining available information from different datasets. The accuracy of workforce estimates relies upon the quality of information supplied by DHBs to those datasets, as well as its completeness.

Vacancy rates reported here are estimates based on all DHB services, so will not reflect variations specific to mental health and addiction services.

The AOD workforce in all regions, and the Central region's forensic mental health workforce have been estimated based on their respective share of mental health and addiction expenditure and the overall reported workforce composition for these services. This means that the specific structure and composition of the workforce in each region may not be well represented in this report.

The DHB employed workforce information and the Werry Workforce Whāraurau results for DHB CAMHS workforce have not been collected in the same way and do not necessarily align. Workforce estimates may be best considered in occupation groups rather than roles.

Workforce roles and groups identified for this report are limited to the information available from the DHB employed workforce collected by HWIP. Key workforce roles like peer support and cultural support workers, and peer and family and whānau advisors are not specifically identified.

Concluding comments

This report has shown that credible results may be derived from estimating the workforce based on the DHB employed workforce collected by HWIP and other available information. The workforce estimates provided support future workforce planning and development. When combined with the information from the 2018 *More than numbers* NGO workforce survey (Te Pou o te Whakaaro Nui, 2018), the information contributes to our understanding of the adult mental health and addiction workforce regionally and nationally.

DHB mental health and addiction services are seeing more people than ever before. Key workforce changes identified here include growth of the less qualified enrolled nurse and support worker roles; and the decreasing ratio of DHB workforce to population and people accessing services. Further research is needed to determine the drivers and impact of these changes on DHB service delivery and service integration; workforce wellbeing; and the experience and outcomes for people, and their whānau, who access services.

Background

Mental health and addiction services are provided by district health boards (DHBs) and non-government organisations (NGOs), as well as by primary healthcare organisations and other services such as schools, prisons, and social services. These services are funded by a range of government sectors including the Ministries of Health, Social Development, Justice and the Department of Corrections. Services may also be funded privately or provided in philanthropic organisations.

Within the health sector, secondary care mental health and addiction services are delivered by the DHB provider arm and contracted from NGOs. DHBs employ around 60 per cent of the workforce delivering secondary care mental health and addiction services to people aged 18 years and older (adults), (Te Pou o te Whakaaro Nui, 2015b). Most of the DHB workforce roles are clinically-focused, meaning that DHBs provide an important contribution to specialist secondary care services for people experiencing severe mental health problems and addiction, whether in hospital inpatient facilities or while living in the community.⁵

As is the case for many Organisation for Economic Co-operation and Development (OECD) countries, New Zealand is experiencing increasing demand for mental health and addiction treatment and support, while the supply of qualified and experienced clinicians is limited. In recent years, health policy has aimed to increase DHB secondary care mental health and addiction services' ability to see more people. This goal is expected to be achieved by increasing the number of people seen by NGOs and community-based services to reduce pressure on DHB services, and increasing preventative and early intervention approaches through primary care and other sectors including self-help (Mental Health and Addiction Service Workforce Review Working Group, 2010; Minister of Health, 2016; Ministry of Health, 2012).

Increasing access to DHB mental health and addiction services requires changes to service delivery models, and to the size, composition and capabilities of the workforce. Strategic workforce planning and development can help support those changes. To facilitate planning and development activities, a good understanding is needed of the size and composition of the current mental health and addiction workforce and trends over time, like staff turnover.

Aims and objectives

The purpose of this report is to estimate the DHB provider arm workforce delivering mental health and addiction services to people aged 18 years and older (adults). This includes adult AOD workforce, forensic mental health workforce and mental health workforce, in adult services and in dedicated MHSOP services. The findings are intended to inform future workforce planning and development activities regionally and nationally.

⁵ In 2018, DHB mental health and addiction services employed approximately 12 per cent of the overall DHB workforce, based on the overall DHB employed workforce of 60,759 FTE positions reported by Health Workforce Information Programme (2018).

Specific reporting objectives include:

1. collating workforce information to enable an estimate of the size, composition and turnover of the DHB workforce delivering adult mental health and addiction services
2. describing the inflows and outflows of workforce, by occupation groups
3. understanding changes in the workforce size and composition over time, and in relation to funding, population and service use.

About the *More than numbers* project

In 2014, Te Pou and Matua Raki implemented the *More than numbers* project to bring together information about the workforce in the DHB provider arm and contracted NGOs delivering secondary care adult mental health and addiction services.⁶ *More than numbers* provides aggregated workforce information required for successful workforce planning and development.

The workforce planning process uses information about the current workforce size and profile, as well as information about people entering and exiting the workforce, to anticipate its future size, composition and capabilities (Te Pou o te Whakaaro Nui, 2017b). This information supports identifying priority areas so that workforce development activities are targeted to ensuring the workforce is best able to deliver future services (Te Pou o te Whakaaro Nui, 2017c).

2018 *More than numbers* project

In 2018, the *More than numbers* project focused on closing gaps in existing workforce information. Since 2014, information about the mental health and addiction services' workforce has become available from different sources.

1. Information about people employed in the DHB provider arm mental health and addiction services and role vacancies is collated by the HWIP team at the end of every quarter.
2. Government has collected information about mental health and addiction support workers from NGOs to support extension of the recent pay equity settlement to this group.
3. Te Rau Matatini has surveyed the Māori health workforce across a range of health services.
4. Werry Workforce Whāraurau continues to produce its biannual stocktake of the workforce in DHB and NGO child and adolescent mental health and addiction services.
5. Te Pou launched the Real Skills online self-assessment tool, which provides aggregated information about workforce capabilities and development needs.

Key activities in the 2018 *More than numbers* project include:

- Collation and analysis of DHB employed workforce information collected by HWIP for mental health and addiction employees.
- A survey of the workforce in NGOs with health contracts to deliver secondary care AOD and mental health services.

⁶ This group of services was described as "Vote Health funded" in the previous 2014 survey. The series of 2014 reports and infographics are available from the Te Pou website.

- Compilation of the DHB and NGO workforce information for adult services.

This report describes the estimated workforce in DHB adult mental health and addiction services, including workforce size, composition, and staff turnover. Other reports in the 2018 *More than numbers* series will combine this information with other sources, such as the estimated NGO secondary care workforce, to understand the adult mental health and addiction workforce across both provider groups. All reports are provided on the Te Pou website.

Definitions

Adult mental health and addiction services, for the purposes of this report, are DHB provider arm AOD services, forensic mental health services, and mental health services for adults.

Adults are people aged 18 years and older, including older adults aged 65 years and older.

Health sector is the system of services funded by the Ministry of Health (or Vote Health), excluding services funded by other government ministries and departments.

Mental health and addiction workforce is the DHB provider arm workforce delivering adult mental health and addiction services.

Mental health services for older people (MHSOP), is dedicated mental health and addiction services for older people aged 65 and over.

Primary care is the provision of first point of contact services by general practice teams, school-based health services, and other community health services provided by NGOs (Ministry of Health, 2012).

Secondary care is the provision of specialist services by DHBs and health contracted NGOs, most often accessed by people following referral from primary care providers.

Method

The data analysed in this report is based on information about DHB employed workforce extracted by HWIP for the quarter ended 31 March 2018. HWIP has provided Te Pou with regionally aggregated information and analyses about DHB employees with a PAOW code associated with mental health and addiction,⁷ by ANZSCO role codes. They also provided information about FTEs recruited to and resigned from DHB employment with a mental health and addiction PAOW code for the year ended 31 March 2018; and DHB FTEs vacant and FTEs employed across all PAOW codes as at 31 March 2018.

The workforce in DHB adult mental health and addiction services is estimated from the HWIP DHB employed workforce information and vacancies, less the reported 2016 CAMHS workforce provided by Werry Workforce Whāraurau (2017) and compared to the distribution of mental health and addiction expenditure for DHB adult services and dedicated MHSOP provided by the Ministry of Health.

Exclusions

The report excludes:

- DHB employed workforce with a mental health and addiction PAOW who are on long-term leave, leave without pay and parental leave, casual staff and contractors
- workforce in DHB child and adolescent mental health and addiction services (CAMHS)
- workforce in DHB contracted primary healthcare, NGO mental health and addiction services, aged care and problem gambling services
- workforce in social services funded by other government sectors.

Data extracts

DHB employed workforce data was extracted from the HWIP dataset for the quarter ended 31 March 2018. This included all DHB employees whose PAOW is associated with mental health and addiction.⁸ The data was aggregated and analysed by HWIP according to their current practice, plus specifications provided by Te Pou.

Werry Workforce Whāraurau provided information about the workforce in DHB child and adolescent mental health services (CAMHS), by role, service, and region from its 2016 stocktake of CAMHS services (Werry Workforce Whāraurau, 2017).

The Ministry of Health supplied information about adult mental health and addiction expenditure for DHB provider arm services for the year ended 30 June 2017. This information was screened prior to

⁷ Mental health and addiction PAOW codes and descriptions are provided in Appendix A (Table 3).

⁸ See footnote 7 on page 13.

use to exclude out of scope activities such as primary care, aged care, research, workforce development, quality and audit.

Other data sources used in this report include Statistics New Zealand (2017) population estimates and information about people accessing services extracted from the Ministry of Health Programme for Integration of Mental Health Data (PRIMHD).

Measures

Full-time equivalent (FTE) positions

FTE position information is calculated by HWIP as employees annual contracted hours divided by 2086 hours per annum (40 hours per week).

FTEs employed and vacant

The number of FTE positions employed plus the number of FTE positions vacant.

Services

The workforce is analysed across three types of mental health and addiction services: AOD; forensic mental health; and mental health services. Allocation of workforce to each service is based on the relevant PAOW codes and services' proportionate share of mental health and addiction expenditure.

Analyses

The HWIP team provided FTE DHB employed workforce information aggregated to ANZSCO code, by PAOW and region. Prior to analysis, ANZSCO codes were aligned with the roles and occupation groups used in the previous *More than numbers* workforce surveys (Te Pou o te Whakaaro Nui, 2015b, 2018).⁹ Allocation of ANZSCO role codes to *More than numbers* occupation groups is summarised in Appendix A (Table 4). The data provided by HWIP, Werry Workforce Whāraurau and the Ministry of Health was used to estimate the workforce in the following way.

Estimated FTEs vacant and vacancy rate

An estimate of FTEs vacant was calculated by region and by ANZSCO role code based on the rate of current FTEs vacant per FTE employed across all DHB services for each occupation group, and FTEs vacant for psychiatrists and addiction practitioners.¹⁰

The vacancy rate was calculated as the sum of estimated FTEs vacant divided by the sum of FTEs employed plus estimated FTEs vacant.

⁹ More information is available on Table 4, on page 10 and Appendix A (Table 5).

¹⁰ The use of occupation groups was due to vacancy information not always being specific to one ANZSCO code (e.g. there are 13 codes for registered nurse), and the primary area of work for role vacancies is not currently recorded.

Estimated DHB adult mental health and addiction workforce

The estimated DHB adult mental health and addiction workforce was calculated by subtracting the CAMHS 2016 workforce from the FTE DHB employed workforce plus estimated FTEs vacant, by roles and by region. These calculations are summarised for the workforce overall in Table 1, by occupation groups.

Table 1. *Estimated DHB mental health and addiction workforce for adults*

Occupation group	2018 DHB FTEs employed plus estimated vacant	2016 DHB CAMHS workforce (FTEs employed & vacant)	Estimated adult mental health and addiction workforce (FTEs)
Allied health	1,718.4	621.5	1,096.9
Nurses	3,548.7	333.0	3,215.7
Medical practitioners	768.4	98.2	670.2
Support workers	1,078.8	77.6	1,001.2
Administration & management	745.8	126.9	618.9
Total (FTEs employed & vacant)	7,860.1	1,257.1	6,603.0

Source: Werry Workforce Whāraurau (2017).

Estimated adult workforce by services

The initial workforce estimates were reviewed against DHB mental health and addiction expenditure for the three different services: AOD, forensic mental health, and mental health services. This indicated that PAOW coding under-reported the AOD workforce across all four regions, and the forensic mental health workforce in the Central region.

The resulting estimated DHB workforce was validated against the relative share of mental health and addiction expenditure, by service and region. There was no workforce coded in the AOD or forensic mental health PAOW for the Central region, and some apparent under-reporting of AOD workforce in the other three regions. To address these disparities, mental health workforce was reallocated to AOD and forensic mental health roles. Allocation to workforce roles was by pro-rata according to the respective workforce compositions for all employees with AOD or forensic PAOW codes. This method is aligned to the NGO workforce estimation (Te Pou o te Whakaaro Nui, 2018); see Table 2.¹¹ Final workforce estimates by role and services delivered are provided in Appendix B (Table 6).

¹¹

Table 2. Summary of estimated DHB workforce by reported PAOW and reallocation of FTE workforce to align with mental health and addiction expenditure by services

	AOD services	Forensic mental health services	Mental health services	Total
Workforce by PAOW (FTEs)	361.7	780.5	5,460.4	6,602.7
Proportion of estimated workforce	5.5%	11.8%	82.7%	100.0%
Proportion of expenditure	9.4%	13.0%	77.6%	100.0%
FTEs reallocated by region:				
Northern (FTEs)	55.5	-	-55.5	-
Midland (FTEs)	65.6	-	-65.6	-
Central (FTEs)	100.8	208.0	-308.8	-
South Island (FTEs)	37.2	-	-37.2	-
Total FTEs reallocated	259.1	208.0	-467.1	-
Estimated total workforce (FTEs)	620.8	988.5	4,993.4	6,602.7

Source: Mental health and addiction expenditure, Ministry of Health Price Volume Schedule 2016/17.

Workforce ratios to population and to people accessing services

Ratios of estimated workforce to adult population and to people accessing services were calculated using the following methods.

- Workforce to population (per 100,000 adults) used 2017 population estimates from Statistics New Zealand (2017), for age ranges 20 years and older,¹² and were calculated as workforce divided by population multiplied by 100,000; see population tables in Appendix F.
- Workforce to people accessing services (per 10,000 adults) used 2017 unique consumer information extracted from the Programme for the Integration of Mental Health Data (PRIMHD) by the Ministry of Health and formatted by Te Pou for age ranges from 18 years and older; see service use tables in Appendix F.

Turnover

Information was requested from HWIP about the number of voluntary resignations,¹³ and new hires for the year ended 31 March 2018, by occupation group and region. Workforce turnover was calculated in three parts as follows.

- The resignation rate was calculated by dividing the total FTE resignations during the year by the total FTEs employed and vacant.
- The recruitment rate was calculated by dividing total FTE new hires during the year by the total FTE workforce (employed and vacant).

¹² Statistics New Zealand population estimates and projections are presented in 5-year age ranges from birth to 89 years, and totals for those aged 90 years and older. Information about adults aged 18 to 19 years is not currently published.

¹³ Excludes redundancies, completion of fixed term contracts, and employee deaths.

- The workforce growth or contraction was the difference between resignation and recruitment rates. A positive difference indicated workforce growth and negative indicated contraction over the year to 31 March 2018.

Comparison to 2014 workforce

2018 DHB workforce estimates were compared to an estimate of the 2014 DHB workforce. The estimated 2014 DHB workforce included 663 FTEs (employed and vacant) in the DHB AOD workforce, 942 FTEs in the forensic mental health workforce, and 4,455 FTEs in mental health workforce; equating to 6,060 FTEs overall. This estimate was based on information collected by the 2014 *More than numbers* organisation survey of adult mental health and addiction services (Te Pou o te Whakaaro Nui, 2015b) plus the 2010 survey of DHB workforce in dedicated mental health and addiction services for older people (Te Pou o te Whakaaro Nui, 2011).

Results

Key findings

The DHB workforce is estimated to be 6,603 FTEs employed plus vacant.

The vacancy rate was 6 per cent.

The largest workforce group was nurses (46 per cent), followed by allied health workers (17 per cent) and support workers (15 per cent).

DHB adult mental health and addiction workforce turnover was 12 per cent on average.

Key workforce roles with slightly higher than average turnover were support workers and allied health workers (13 per cent each).

DHB mental health and addiction workforce

This section describes the estimated DHB adult mental health and addiction workforce by region alongside funding and service use information.¹⁴

Workforce size

The total estimated workforce in DHB adult mental health and addiction services was 6,603 FTEs (employed plus vacant) with a vacancy rate of 6 per cent. Within the total estimated DHB workforce, the AOD workforce included 621 FTEs (9 per cent overall), the forensic mental health workforce included 988 FTEs (15 per cent), and 4,993 FTEs (76 per cent) were in the mental health workforce; see Figure 1.

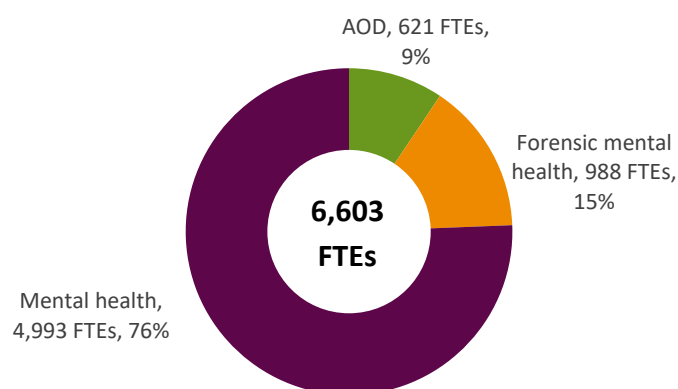


Figure 1. Total estimated DHB adult mental health and addiction workforce (FTEs employed plus vacant).

¹⁴ The analyses used to estimate the workforce are provided in the Methods section.

The regional distribution of the DHB adult mental health and addiction workforce varied, 40 per cent was located in the Northern region, 23 per cent was located in the South Island region, 20 per cent was in the Central region, and 17 per cent in the Midland region; see Figure 2.

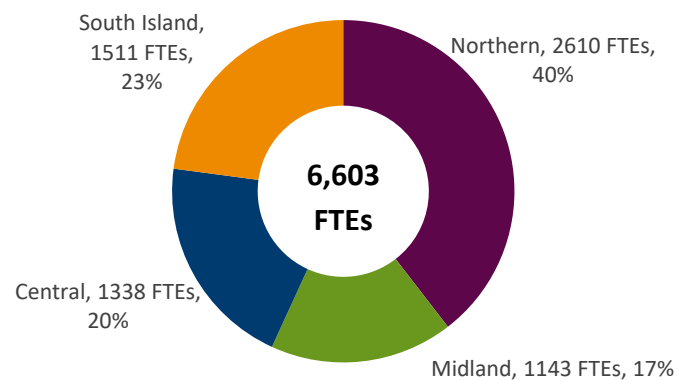


Figure 2. Regional distribution of the estimated DHB adult mental health and addiction workforce (FTEs employed and vacant).

Clinical roles comprised nearly three-quarters (73 per cent) of the estimated DHB adult mental health and addiction workforce, with non-clinical roles making up 15 per cent, and administration and management roles the remaining 12 per cent; see more information in Appendix B (Table 6).

The workforce in DHB AOD services was mostly comprised of clinical roles (87 per cent). In contrast, the DHB forensic mental health and mental health workforces had a smaller proportion of the workforce in clinical roles (66 and 72 per cent respectively); see Appendix C.

The distribution of the workforce across DHB mental health and addiction services varied by region. The Midland and South Island regions had slightly higher proportion of their workforce in clinical roles (76 per cent each), compared to the Northern and Central regions (72 and 68 per cent respectively). The very low rate of administration and management roles in the Midland region (8 per cent) may indicate that this group is not fully coded for PAOW; see Figure 3.

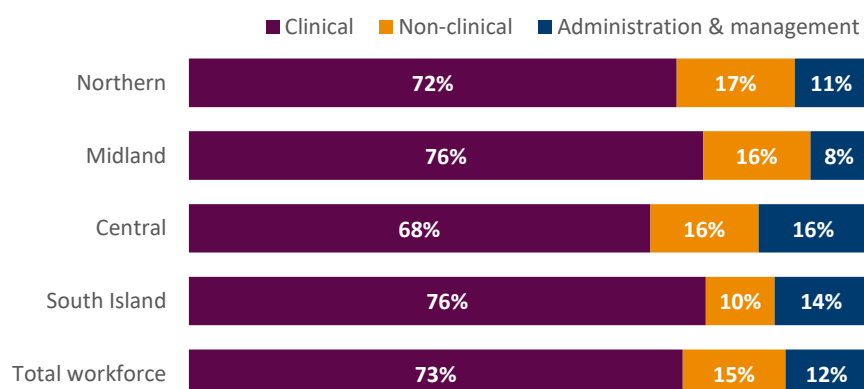


Figure 3. Comparison of the distribution of estimated DHB adult mental health and addiction workforce, by region.

Workforce ratios to population and people accessing services

Ratios of workforce to population and people accessing services are useful for comparing change over time in workforce size and composition within services and informing workforce planning. These ratios are provided in this section. Because of differences in models of care and access, ratios are not comparable by service.

Workforce to population ratios

Overall, the DHB adult mental health and addiction workforce per 100,000 adults in the population was 186 FTEs. In the AOD workforce, the ratio of FTE workforce to population totalled 18 FTEs per 100,000 adults. For the forensic mental health workforce, the ratio was 28 FTEs; and for the mental health workforce it was 141 FTEs; see Appendix D (Table 20).¹⁵

The DHB adult mental health and addiction workforce had 136 FTEs in clinical roles per 100,000 adults, and 28 FTEs in non-clinical roles.

The regions varied, with DHBs in the Northern and South Island regions having the highest rates of clinical workforce per 100,000 adults (137 FTEs) and the Midland region having the lowest rate for clinical workforce (131 FTEs per 100,000 adults). DHBs in the Northern region had the highest rates of non-clinical workforce (33 FTEs per 100,000 adults); see Figure 4.

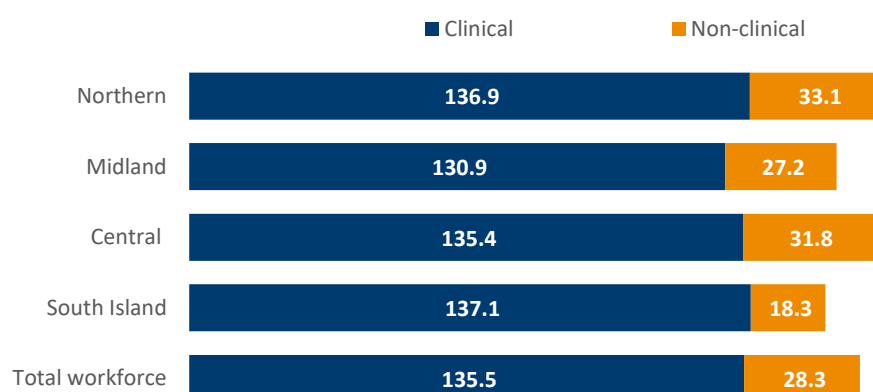


Figure 4. Estimated FTE positions (employed plus vacant) per 100,000 population by region and workforce total.

Workforce to people accessing services ratios

Overall, the ratio of FTE workforce per 10,000 people seen by DHB services was 601 FTEs. In the AOD workforce, the ratio of FTE workforce to people seen totalled 57 FTEs; and for the mental health workforce it was 455 FTEs; see Appendix D (Table 24).

In relation to people accessing services, the DHB mental health and addiction workforce had a ratio of 437 FTEs in clinical roles per 10,000 people seen by DHB services, and 91 FTEs in non-clinical roles.

¹⁵ Based on Statistics New Zealand (2017) estimates for people aged 20 years and older.

The South Island region had the highest rate of clinical workforce to people seen (521 FTEs per 10,000 people) and the Northern region had the highest rate of non-clinical workforce to people seen (104 FTEs per 10,000 people); see Figure 5.

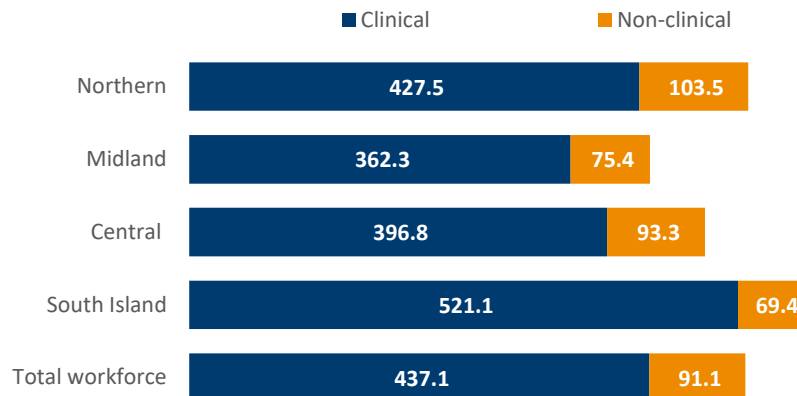


Figure 5. Estimated FTE positions (employed plus vacant) per 10,000 adults seen by DHB adult mental health and addiction services, by region and nationally.

Workforce composition

Registered nurses comprised nearly half (46 per cent) of the DHB mental health and addiction workforce. The next largest group was allied health workers (17 per cent), and support workers (15 per cent); for more information see tables provided in Appendix B and Appendix C.

The role distribution of the workforce differed by services. The forensic mental health workforce had a larger proportion of this workforce in support worker roles than both the AOD and mental health workforces. The AOD workforce had a smaller proportion of its workforce in nursing roles compared to the other two services; see Figure 6.

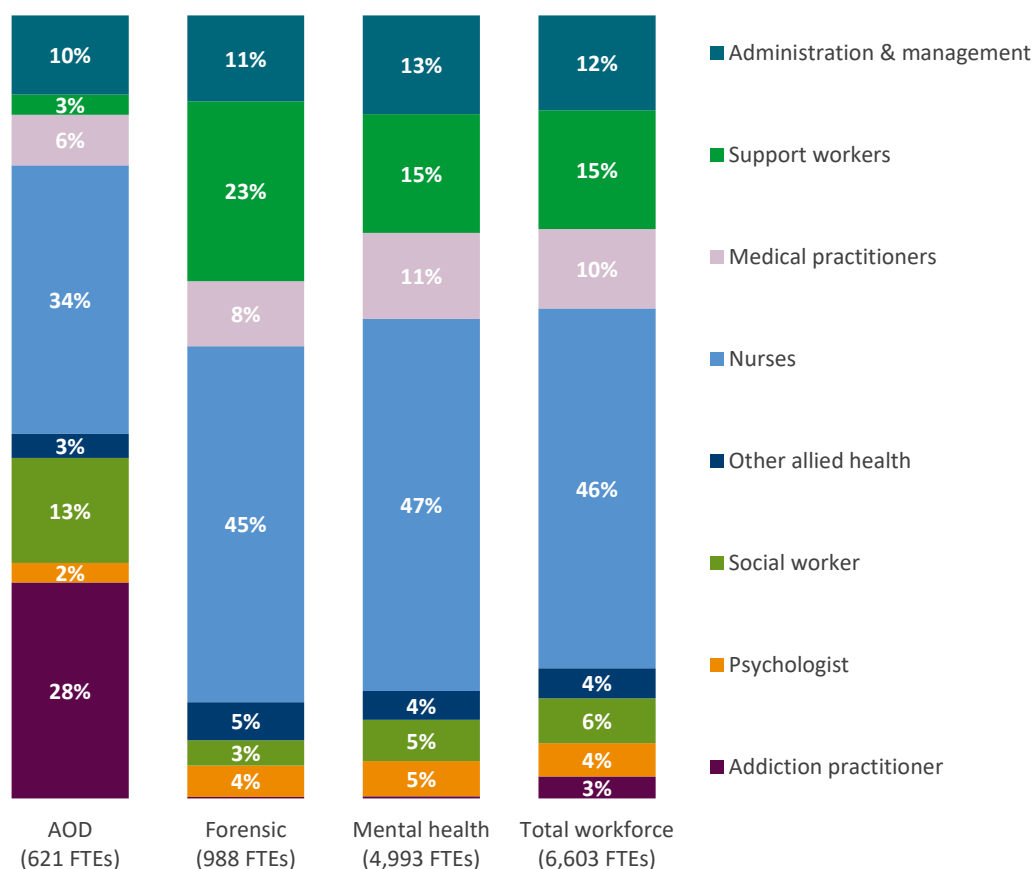


Figure 6. Proportion of estimated DHB mental health and addiction workforce by roles and services.

Vacancies

Vacancies for the DHB mental health and addiction workforce were estimated based on reported vacancies and employed workforce by occupation groups for all DHB services.¹⁶ Nationally, the DHB mental health and addiction workforce vacancy rate was estimated to be 6 per cent. Calculation of the vacancy rates for composition service groups (AOD, forensic mental health and mental health) was not undertaken due to concerns that the method would not be reliable for workforce subgroups.

Allied health workers, including occupational therapists, psychologists, and social workers had the highest vacancy rates alongside psychiatrists (8 to 9 per cent), whereas resident medical officers, managers and team leaders had the lowest rates (3 and 4 per cent respectively); see Appendix B (Table 6).

Compared to the national average vacancy rate of 6 per cent, the Midland and Northern regions had higher than average rates (9 and 8 per cent respectively). In contrast the Central and South Island regions had very low rates at 3 and 4 per cent respectively.; see the regional workforce tables provided in Appendix B.

¹⁶ This was because DHB role vacancies reported to HWIP are not attributed a PAOW code.

Workforce turnover

Workforce turnover results include some DHB CAMHS employees.¹⁷ The DHB mental health and addiction workforce (including CAMHS, adult and MHSOP) grew by just over 3 per cent in the year to 31 March 2018. Much of this growth was seen in the allied health, nurse and medical practitioners' occupation groups, for which recruitment was in excess of resignations by 2 per cent or more; see Appendix B (Table 12).

Resignations

Over the year to 31 March 2018, the overall DHB workforce resignation rate was 12 per cent. The support worker group had the highest resignation rate of 13 per cent, and the nurse and administration and management group had the lowest rates of 10 per cent; see Figure 7.

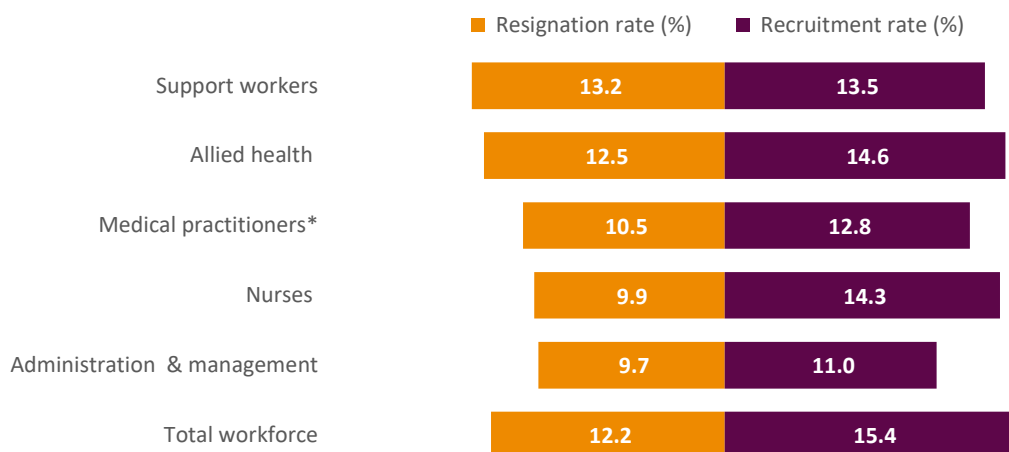


Figure 7. Resignation and recruitment rates for DHB mental health and addiction workforce by occupation groups and for total workforce.

* Resignation and recruitment rates for junior medical staff have been excluded from medical practitioners' calculation, due to the unique nature of their employment conditions.

Regional resignation rates varied, with Central region having the highest rate (15 per cent), and the Midland region having the lowest at 11 per cent; see Figure 8

¹⁷ Calculations used to determine recruitment and resignation rates are provided in the Method section. The total FTE positions employed plus vacant, including child and youth workforce, was 7,860 FTEs.

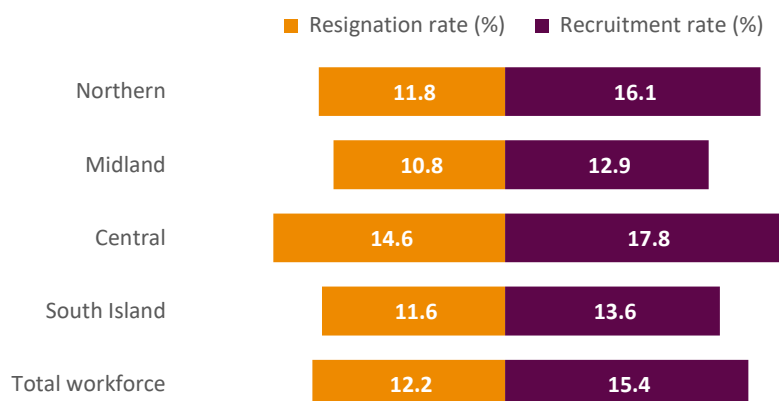


Figure 8. Resignation and recruitment rates by region, with total workforce rates.

Note: Resignation and recruitment rates for junior medical staff have been excluded due to the unique nature of their employment conditions.

Recruitment

Over the year to 31 March 2018, the national recruitment rate was 15 per cent for mental health and addiction workforce (including CAMHS, adult and MHSOP workforces); see Figure 7. Nurses and allied health occupation groups had the highest recruitment rates at between 14 and 15 per cent.

Regional recruitment rates varied. The Central region had the highest recruitment rate of 18 per cent, and Midland region had the lowest rate at 13 per cent; see Figure 8.

Overall, FTE recruitment exceeded resignations across all four DHB regions, suggesting workforce growth of around 3 per cent overall for the year to March 2018. The Northern region had the highest workforce growth of over 4 per cent, followed by the Central region (3 per cent). The Midland and South Island regions each grew by 2 per cent.

Discussion

The information presented in this report is an estimation based on the best available evidence including the DHB employed workforce and vacancies provided by HWIP, Werry Workforce Whāraurau, and mental health and addiction expenditure from the Ministry of Health. The DHB adult mental health and addiction workforce is estimated by size and composition, regionally and nationally.

The following discussion puts these results into context, by:

- describing the environmental changes influencing DHB service delivery including changes in funding, population and people accessing services
- comparing the 2018 DHB workforce findings with those from 2014 (adult workforce) and 2010 (older adult workforce) and explaining key differences and similarities
- discussing the utility of the HWIP DHB employed workforce information to understand the DHB workforce

Funding, population and service use

This section outlines the changes in mental health and addiction expenditure, adult population and service use since that reported in the 2014 *More than numbers* survey reports (Te Pou o te Whakaaro Nui, 2015b). More detailed information is available in the tables provided in Appendix D.

Over the past 4 years, health funding for DHB secondary care mental health and addiction services has increased by 16 per cent. At the same time the population grew by 10 per cent (Statistics New Zealand, 2017); New Zealand's wage inflation averaged 10 per cent, and the consumer price index rose by 4 per cent.¹⁸ The value of health funding for DHB mental health and addiction workforce per adult in the population increased by 5 per cent from \$225 in 2013 to \$237 in 2018; see Appendix D (Table 17).

During the same period, the number of people accessing DHB mental health and addiction services increased by 14 per cent. DHBs saw nearly 110,000 people in 2017 compared to just over 96,000 in 2013;¹⁹ see Appendix D (Table 21). These figures suggest that over the past 4 years, funding for DHB services has exceeded population growth, but has not offset the full cost of wage inflation and other costs of delivering services to more people.

Most people accessing secondary care mental health and addiction services in New Zealand are seen by DHBs. However, the relative contribution of the DHB provider arm to service delivery has decreased slightly, down from seeing 85 per cent of all people accessing services in 2013 to 82 per cent in 2017.

¹⁸ See Reserve Bank calculator <https://www.rbnz.govt.nz/monetary-policy/inflation-calculator>

¹⁹ 2013 service use information is based on figures published by the Ministry of Health see <https://www.health.govt.nz/publication/mental-health-and-addiction-service-use-2012-13>.

Mental health and addiction workforce

Workforce size

The DHB provider arm adult mental health and addiction workforce is estimated to have grown by approximately 543 FTE positions (9 per cent); from 6,060 FTEs (employed and vacant) in 2014,²⁰ to 6,603 FTEs in 2018. The workforce turnover for the year ended 31 March 2018 indicates that two-thirds of this growth occurred prior to March 2017.

When population is considered, the DHB provider arm workforce has decreased slightly from 188 FTEs per 100,000 people aged over 20 years to 186 FTEs (just under 1 per cent).²¹ Likewise, the DHB mental health and addiction workforce per 10,000 people seen by DHB services decreased by 5 per cent from 630 FTEs per 10,000 adults seen, to 601 FTEs.²²

Compared to 2014, the FTE AOD workforce decreased in size by 42 FTEs (6 per cent). However, this decrease may be due to an overestimation of common mental health roles in the 2014 AOD workforce (Te Pou o te Whakaaro Nui, 2015b). The estimated forensic mental health workforce grew by 47 FTEs (5 per cent) compared to 2014. This growth may be an overstatement of the 2018 workforce.²³ The mental health workforce grew by 539 FTEs (12 per cent), most of which was related to growth in support worker, nurse, and medical practitioners' roles; see Appendix E (Table 30).

Workforce composition

The different methods used for data collection and estimation means that the workforce composition in 2014 and 2018 is not directly comparable.²⁴

Between 2014 and 2018, there appears to have been a slight reorientation of the workforce towards more non-clinical roles; increasing their share of the workforce from 11 per cent in 2014 to 15 per cent in 2018. Over the same period, nurses' share of the workforce decreased slightly from 47 to 46 per cent of the workforce; allied health workers' share decreased from 18 to 17 per cent; and medical practitioners remained stable at 10 per cent; see Appendix E (Table 29).

²⁰ Including the findings for DHB provider arm services of the 2014 *More than numbers* organisation workforce survey (5,656 FTEs) plus the 2010 Te Pou survey of DHB dedicated MHSOP workforce (403 FTEs), (Te Pou o te Whakaaro Nui, 2011, 2015b).

²¹ Based on population estimates provided by Statistics New Zealand (2017), see Appendix D (Table 18).

²² Based on 2013 service use information published by the Ministry of Health, see footnote 19; and 2017 service use information provided by the Ministry of Health, PRIMHD extract 9 April 2018, extracted and formatted by Te Pou.

²³ This may be due to substantially larger than expected workforce in the forensic mental health PAOW for Northern region DHBs, compared to funding distribution.

²⁴ Role naming conventions differ across the two periods, so changes in the workforce composition may not necessarily reflect workforce growth or contraction within roles or groups. Differing naming conventions may be responsible for large differences in the distribution of workforce across psychiatrists, resident medical officers, and other medical practitioners in 2018 compared to 2014. The same may be the case for different roles within the administration and management group; see Appendix E (Table 29).

Reduction in the AOD workforce for psychologists, occupational therapists, medical practitioners, support workers, and administration and management roles may reflect in part overestimations of the workforce in earlier surveys (Te Pou o te Whakaaro Nui, 2015a); see Appendix E (*Table 30*).

The mental health workforce had a large increase in the number of enrolled nurses employed (76 FTEs, 160 per cent increase on the 2014 workforce) and support workers (340 FTEs, 80 per cent increase on the 2014 workforce); see Appendix E (*Table 30*). It is possible these findings indicate DHBs are diversifying their workforce to support specialist staff to work to top of scope (Te Pou o te Whakaaro Nui, 2014). Alternatively, it may be an indication that financial restraints are driving workforce decisions. Further investigation is needed to better understand the reasons for these changes and their impact on the workforce, and the people, and their whānau, who access services.

Turnover

The DHB mental health and addiction workforce resignation rate (12 per cent) was low compared to that of NGOs (23 per cent) and New Zealand's average turnover across all industries (19 per cent), (Lawson Williams, 2017; Te Pou o te Whakaaro Nui, 2018). DHB mental health and addiction employee turnover was similar to the FTE turnover for all DHB employees in 2017 (Te Pou o te Whakaaro Nui, 2017a). Turnover was particularly low over the past year for medical practitioners (excluding resident medical officers) and nurses.

Utility of DHB employed workforce HWIP data

In terms of capturing a snapshot of the DHB adult mental health and addiction workforce, this report shows that utilising information from the DHB employed workforce held by HWIP can provide credible results for mental health and addiction services. This is the case for occupation groups and some role groups with large workforces, such as registered nurses and allied health roles like social workers and occupational therapists.

Key identifiers in the HWIP DHB employed workforce dataset supporting these results are the PAOW code for DHB mental health and addiction employees and ANZSCO role codes. In 2018, more than 99 per cent of over 60,000 DHB employee records have been coded for PAOW and role. There are six mental health and addiction PAOW codes, with mental health PAOW codes being the most commonly utilised. Comparison of reported workforce against mental health and addiction expenditure suggested that more specific coding is needed for some DHB employees working in AOD and forensic mental health services. To address possible under-reporting of these workforces for this report, redistribution of FTE workforce from mental health services to AOD and forensic mental health services was applied.²⁵ It is anticipated that as PAOW coding accuracy improves over time, the need for reallocation of mental health workforce will reduce.

²⁵ See Table 2 on page 19.

PAOW coding for mental health and addiction services does not currently specify the setting in which services are delivered (inpatient or community). For the purposes of workforce planning and development of the mental health and addiction workforce, it would be useful to be able to see the workforce in inpatient services separate from those delivering services in the community. However, the distribution of workforce across inpatient and community services may not have changed substantially since 2014, given workforce funding distribution across settings has not changed since 2013 (69 per cent for community services and 31 per cent for inpatient services).²⁶

ANZSCO role coding of DHB employed workforce provides useful information for understanding the composition of the workforce. Because ANZSCO role codes span across all DHBs, going forward these enable greater comparability of workforce composition changes over time, particularly for large clinical roles.

Some key mental health workforce roles are not currently reflected in ANZSCO codes. These roles include peer support roles (both consumer and whānau-focused roles), cultural support roles, and advanced peer workforce roles such as peer and whānau advisors. The development of new ANZSCO codes or dedication of existing codes to these roles would help to identify the size and growth of these workforces in the DHB provider arm in the future.

Limitations

The workforce described in this report is limited to DHB mental health and addiction services for adults, including dedicated MHSOP. Mental health and addiction specialists are employed by other DHB services such as physical health services, emergency departments, and health services for older people. That workforce was out of scope for this report.

The workforce size and composition in mental health and addiction services has been estimated by combining available information from different datasets. The accuracy of workforce estimates relies upon the quality of information supplied by DHBs to those datasets, as well as its completeness.

The estimated adult mental health and addiction workforce vacancy rates are conservative estimates based on information from all DHB services (these employ over 60,000 people). Consequently, vacancy rates reported here will not reflect variations specific to mental health and addiction services compared to other DHB services. The 2018 estimated DHB adult mental health and addiction workforce vacancy rate (6 per cent) is reasonably consistent with the findings from the 2014 *More than numbers* organisation workforce survey (just over 5 per cent); (Te Pou o te Whakaaro Nui, 2015b).

The estimated workforce size is likely to be slightly under-reported due to incomplete PAOW coding in one region (around 60 to 80 FTEs or about 1 per cent). This under-reporting may be slightly offset by very small over-reporting due to the use of 2016 CAMHS workforce data if there has been an

²⁶ Based on information from the Ministry of Health Price Volume Schedule 2016/17, 2012/13.

increase in the CAMHS workforce size or major change in composition between 2016 and 2018 (potentially up to 25 FTEs or 0.3 per cent).

The AOD workforce in all regions, and the Central region's forensic mental health workforce have been estimated based on their respective share of mental health and addiction expenditure and the overall reported workforce composition for these services. This means that regional specificities of the workforce structure may not be well represented in this report. It is anticipated that the situation will be resolved over time with improved PAOW coding.

The HWIP supplied employee data and the Werry Workforce Whāraurau results for DHB CAMHS workforce have not been collected in the same way and do not necessarily align, so estimates are best considered in occupation groups rather than by ANZSCO codes.

Workforce roles and groups identified for this report are limited to the range of ANZSCO codes available. Key workforce roles like peer support and cultural support workers, and peer and family and whānau advisors are not identified by specific ANZSCO codes.

Concluding comments

This report, even with limitations, has shown that credible results may be derived from estimating the DHB adult mental health and addiction workforce based on the HWIP-supplied DHB employed workforce information and other available evidence. The estimates provided here support future workforce planning and development for adult mental health and addiction services. When combined with the information from the 2018 *More than numbers* NGO workforce survey (Te Pou o te Whakaaro Nui, 2018), the information contributes to our understanding of the adult mental health and addiction workforce regionally and nationally.

DHB mental health and addiction services are seeing more people than ever before. Key workforce changes identified here include growth of the less qualified enrolled nurse and support worker roles; and the decreasing ratio of DHB workforce to population and people accessing services. Further research is needed to determine the drivers and impact of these changes on DHB service delivery and service integration; workforce wellbeing; and the experience and outcomes for people who access services and their whanau.

Appendices

The following appendices are provided.

- Appendix A: HWIP DHB employed workforce data
 - PAOW codes and relevant service groupings
 - Mental health and addiction workforce roles and occupation groups for this report
 - ANZSCO codes, descriptions and occupation groupings
 - Appendix B: DHB mental health and addiction workforce
 - Estimated DHB adult mental health and addiction workforce by roles and services delivered
 - Northern region, estimated DHB mental health and addiction workforce by roles and services delivered
 - Midland region, estimated DHB mental health and addiction workforce by roles and services delivered
 - Central region, estimated DHB mental health and addiction workforce by roles and services delivered
 - South Island region, estimated DHB mental health and addiction workforce by roles and services delivered
 - Estimated DHB adult mental health and addiction FTE workforce per 100,000 adult population
 - Total reported recruitment and resignations and respective workforce growth or contraction for the year ended 31 March 2018.
 - Appendix C: DHB workforce by services
 - Estimated DHB AOD workforce by roles and region
 - Estimated DHB forensic mental health workforce by roles and region
 - Estimated DHB mental health workforce by roles and region
 - Appendix D: Funding, population and service use
 - Mental health and addiction expenditure
- Note:* includes expenditure for services to adults and dedicated MHSOP.
- Population
 - Service use
 - 2017 adult population by ethnic group and DHB-locality
 - People aged 18 years and older seen by DHB mental health and addiction services by DHB-locality
 - People aged 18 years and older seen by DHB AOD services by DHB-locality
 - People aged 18 years and older seen by DHB mental health services by DHB-locality
- Appendix E: Workforce comparisons 2018 to 2014
 - Change in estimated DHB mental health and addiction workforce since 2014 by roles
 - Change in estimated DHB workforce since 2014 by roles and services delivered

Appendix A: HWIP DHB employed workforce data

Each quarter, the HWIP team collects and collates DHB employed workforce information and role vacancies from all 20 DHBs' human resources and payroll systems. They report quarterly on aggregated information for all DHB employees; see <https://tas.health.nz/strategic-workforce-services/health-workforce-information-programme-hwip/>. Almost all DHB employees are allocated a PAOW code, allowing the DHB employed workforce to be identified by services provided. Currently there is no similar collection of information from non-government organisations delivering mental health and addiction services.

Services

The HWIP team provided employee information for six PAOW codes including mental health, forensic mental health and AOD services. Table 3 outlines the codes provided by HWIP and their allocation to mental health and addiction groupings for this report.

Table 3. *PAOW codes and relevant service grouping for this report*

PAOW code	Service group
0801 Psychiatry – mental health	Mental health
0802 Psychiatry – forensic psychiatry	Forensic mental health
0803 Psychiatry - psychotherapy	Mental health
0804 Primary care – mental health	Mental health
1202 Clinical support – substance abuse	AOD
1919 Clinical support – clinical psychology	Mental health

Workforce role definitions

The workforce information provided by HWIP was allocated to role codes based on ANZSCO role codes. There were 281 individual ANZSCO codes provided for the DHB mental health and addiction workforce. More information about ANZSCO codes and descriptions is provided in Table 5. To allow the DHB workforce information to be combined with findings from the NGO workforce, the data provided by HWIP has been reclassified according to the definitions outlined in Table 4.

Table 4. *Mental health and addiction workforce roles and groups for this report*

Role/group	Description
Clinical roles	Roles requiring clinically-focused qualification that may require registration with an appropriate professional body
Allied health roles	
Social workers	ANZSCO code 272511 Social worker
Occupational therapists	ANZSCO code 252411 Occupational therapist
Psychologists	ANZSCO code 272311 Clinical Psychologist ANZSCO code 272399 Psychologists
Addiction practitioners	ANZSCO code 272112 Drug and alcohol counsellor
Other allied health roles	All other ANZSCO codes relating to allied health professionals.
Nurses	
Enrolled nurses	ANZSCO code 411411 Enrolled nurse
Registered nurses	All ANZSCO codes relating to registered nurses except 411411 Enrolled nurses (reported separately) and 254311 Nurse managers (reported with administration & management roles).
Medical practitioners	
Psychiatrists	ANZSCO code 253411 Psychiatrist
Resident medical officers	ANZSCO code 253112 Resident medical officer
Other medical practitioners	All other ANZSCO codes relating to medical practitioners.
Non-clinical roles	Roles that do not require a clinically-focused qualification or health professional registration
Support workers	All ANZSCO codes relating to non-clinical workforce and including counsellors.
Administration & management roles	
Administration, business, and technical support roles	All ANZSCO codes relating to administration roles and other non-service delivery support roles like cooks and cleaners.
Managers and team leaders	All ANZSCO codes with “manager” in the title, excluding 254311 Nurse managers. ANZSCO code 134212 Nursing clinical director.
Nurse managers	ANZSCO code 254311 Nurse manager.

Table 5 lists all the ANZSCO codes and descriptions for the DHB employed workforce recorded by the HWIP, and shows the relevant groups used for reporting purposes.

Table 5. *List of ANZSCO codes and role descriptions used to describe DHB mental health and addiction employees and reporting groups*

ANZSCO code	ANZSCO description	Reporting group
Clinical roles		
Allied health		
272311	Clinical psychologist	Psychologist
251111	Dietitian	Other allied health
411311	Diversional therapist	Other allied health
272112	Drug and Alcohol Counsellor	Addiction practitioners
251999	Health diagnostic & promotion professionals	Other allied health
251511	Hospital pharmacist	Other allied health
311299	Medical technicians	Other allied health
234999	Natural & physical science professionals	Other allied health
252411	Occupational therapist	Occupational therapist
252511	Physiotherapist	Other allied health
272399	Psychologists	Psychologist
272314	Psychotherapist	Other allied health
272511	Social worker	Social worker
252712	Speech language therapist	Other allied health
Medical		
253312	Cardiologist	Other senior medical
253912	Emergency medicine specialist	Other senior medical
253111	General practitioner	Other senior medical
253999	Medical practitioners	Other senior medical
134211	Medical superintendent (NZ)	Other senior medical
253516	Paediatric surgeon	Other senior medical
253321	Paediatrician	Other senior medical
253411	Psychiatrist	Psychiatrist
253112	Resident medical officer	Resident medical officer
253311	Specialist physician (general medicine)	Other senior medical
253399	Specialist physicians	Other senior medical
Nursing		
411411	Enrolled nurse	Enrolled nurse
254211	Nurse educator	Registered nurse
254411	Nurse practitioner	Registered nurse
254212	Nurse researcher	Registered nurse
134212	Nursing clinical director	Managers and team leaders
254412	Registered nurse (aged care)	Registered nurse
254413	Registered nurse (child & family health)	Registered nurse

ANZSCO code	ANZSCO description	Reporting group
254414	Registered nurse (community health)	Registered nurse
254416	Registered nurse (developmental disability)	Registered nurse
254417	Registered nurse (disability & rehabilitation)	Registered nurse
254418	Registered nurse (medical)	Registered nurse
254422	Registered nurse (mental health)	Registered nurse
254425	Registered nurse (paediatric)	Registered nurse
254424	Registered nurse (surgical)	Registered nurse
254499	Registered nurses	Registered nurse

Non-clinical roles

411711	Community worker	Support workers
272199	Counsellors	Support workers
272113	Family and marriage counsellor	Support workers
411713	Family support worker	Support workers
251911	Health promotion officer	Support workers
423311	Hospital orderly	Support workers
411512	Māori health assistant	Support workers
423312	Nursing support worker	Support workers
423313	Personal care assistant	Support workers
272612	Recreation coordinator	Support workers
272499	Social professionals	Support workers
423314	Therapy aide	Support workers
272613	Welfare worker	Support workers
411716	Youth worker	Support workers

Administration & management

551111	Accounts clerk	Administration and technical support
542112	Admissions clerk	Administration and technical support
731199	Automobile drivers	Administration and technical support
541112	Call or contact centre operator	Administration and technical support
561999	Clerical & office support workers	Administration and technical support
599999	Clerical and administrative workers	Administration and technical support
811211	Commercial cleaner	Administration and technical support
351411	Cook	Administration and technical support
111211	Corporate general manager	Managers and team leaders
262111	Database administrator	Administration and technical support
411712	Disabilities services officer	Administration and technical support
811412	Domestic housekeeper	Administration and technical support
249111	Education adviser	Administration and technical support
251311	Environmental health officer	Administration and technical support
132211	Finance manager	Managers and team leaders
531111	General clerk	Administration and technical support
134299	Health & welfare services managers	Managers and team leaders

ANZSCO code	ANZSCO description	Reporting group
512211	Health practice manager	Managers and team leaders
841412	Horticultural nursery assistant	Administration and technical support
223111	Human resource adviser	Administration and technical support
224999	Information & organisation professionals	Administration and technical support
541211	Information officer	Administration and technical support
224411	Intelligence officer	Administration and technical support
851311	Kitchenhand	Administration and technical support
224912	Liaison officer	Administration and technical support
224611	Librarian	Administration and technical support
221112	Management accountant	Managers and team leaders
224711	Management consultant	Administration and technical support
542114	Medical receptionist	Administration and technical support
254311	Nurse manager	Nurse managers
512111	Office manager	Managers and team leaders
224712	Organisation and methods analyst	Administration and technical support
521111	Personal assistant	Administration and technical support
224412	Policy analyst	Administration and technical support
132411	Policy and planning manager	Managers and team leaders
511112	Program or project administrator	Administration and technical support
225311	Public relations professional	Administration and technical support
139914	Quality assurance manager	Managers and team leaders
542111	Receptionist (general)	Administration and technical support
132511	Research and development manager	Managers and team leaders
312611	Safety inspector	Administration and technical support
521211	Secretary (general)	Administration and technical support
442216	Security consultant	Administration and technical support
442217	Security officer	Administration and technical support
442299	Security officers and guards	Administration and technical support
139999	Specialist managers	Managers and team leaders
561611	Switchboard operator	Administration and technical support
262113	Systems administrator	Administration and technical support
223311	Training and development professionals	Administration and technical support
134214	Welfare centre manager	Managers and team leaders
532113	Word processing operator	Administration and technical support

Appendix B: DHB mental health and addiction workforce

Table 6. *Estimated DHB adult mental health and addiction workforce (FTEs employed plus vacant) by roles and services delivered*

Role (group)	DHB workforce (FTEs)				Proportion of DHB workforce (%)	Vacancy rate (%)
	AOD	Forensic mental health	Mental health	Total		
Clinical roles						
Allied health roles						
Addiction practitioner	171.3	1.9	12.7	185.9	2.8	7.5
Occupational therapist	2.2	46.5	169.5	218.1	3.3	8.0
Psychologist	15.4	39.6	224.8	279.8	4.2	7.8
Social worker	83.2	31.9	263.8	378.9	5.7	7.7
Other allied health	16.9	1.6	15.2	33.8	0.5	6.7
Allied health roles total	289.0	121.5	686.1	1,096.6	16.6	7.7
Nurses						
Enrolled nurse	2.0	15.4	124.3	141.7	2.1	5.0
Registered nurse	211.1	433.8	2,247.4	2,892.3	43.8	5.7
Nurses total	213.1	449.3	2,371.7	3,034.0	46.0	5.7
Medical practitioners						
Psychiatrist	31.7	38.1	304.9	374.7	5.7	9.3
Resident medical officer	2.0	43.6	188.6	234.2	3.5	2.5
Other medical practitioner	6.3	0.5	54.6	61.4	0.9	7.9
Medical practitioners total	39.9	82.3	548.1	670.3	10.2	6.8
Clinical roles total	542.0	653.0	3,605.8	4,800.8	72.7	6.3
Non-clinical roles						
Support workers	16.0	226.9	758.4	1,001.2	15.2	6.3
Non-clinical roles total	16.0	226.9	758.4	1,001.2	15.2	6.3
Administration & management						
Administration and technical support	30.4	53.6	496.2	580.2	8.8	4.5
Managers and team leaders	25.6	22.2	9.1	56.9	0.9	4.1
Nurse managers	6.9	32.8	123.8	163.5	2.5	5.2
Admin & management total	62.9	108.6	629.1	800.6	12.1	4.6
Grand Total	620.8	988.5	4,993.3	6,602.7	100.0	6.1

Table 7. Northern region, estimated DHB adult mental health and addiction workforce (FTEs employed plus vacant) by roles and services delivered

Role (group)	DHB workforce (FTEs)				Proportion of DHB workforce (%)	Estimated vacancy rate (%)
	AOD	Forensic mental health	Mental health	Total		
Clinical roles						
Allied health roles						
Addiction practitioner	79.4	-	12.7	92.1	3.5	10.8
Occupational therapist	2.2	19.3	75.6	97.0	3.7	8.0
Psychologist	5.1	18.6	103.7	127.4	4.9	8.0
Social worker	41.2	17.7	153.4	212.2	8.1	8.0
Other allied health	10.8	1.6	-0.0	12.5	0.5	8.0
Allied health roles total	138.6	57.2	345.4	541.2	20.7	8.5
Nurses						
Enrolled nurse	-	4.3	23.8	28.1	1.1	7.3
Registered nurse	60.2	171.4	783.1	1,014.7	38.9	7.3
Nurses total	60.2	175.7	807.0	1,042.8	40.0	7.3
Medical practitioners						
Psychiatrist	16.5	20.1	134.0	170.5	6.5	10.3
Resident medical officer	1.0	11.0	71.2	83.2	3.2	-
Other medical practitioner	2.0	0.5	34.9	37.4	1.4	7.7
Medical practitioners total	19.5	31.6	240.1	291.1	11.2	7.0
Clinical roles total	218.3	264.5	1,392.4	1,875.2	71.8	7.6
Non-clinical roles						
Support workers	5.4	117.3	331.2	453.9	17.4	7.7
Non-clinical roles total	5.4	117.3	331.2	453.9	17.4	7.7
Administration & management						
Administration and technical support	12.8	39.7	170.8	223.3	8.6	6.9
Managers and team leaders	8.2	5.4	4.9	18.5	0.7	6.9
Nurse managers	2.7	8.6	27.9	39.2	1.5	7.3
Admin & management total	23.7	53.6	203.6	281.0	10.8	7.0
Grand Total	247.4	435.5	1,927.2	2,610.1	100.0	7.5

Table 8. *Midland region, estimated DHB adult mental health and addiction workforce (FTEs employed plus vacant) by roles and services delivered*

Role (group)	DHB workforce (FTEs)				Proportion of DHB workforce (%)	Vacancy rate (%)
	AOD	Forensic mental health	Mental health	Total		
Clinical roles						
Allied health roles						
Addiction practitioner	34.5	1.9	-0.0	36.4	3.2	8.6
Occupational therapist	-	11.7	38.4	50.1	4.4	10.3
Psychologist	2.8	6.2	45.3	54.3	4.8	10.3
Social worker	10.8	3.3	25.7	39.8	3.5	10.3
Other allied health	2.0	-	0.0	2.0	0.2	10.3
Allied health roles total	50.0	23.2	109.4	182.6	16.0	10.0
Nurses						
Enrolled nurse	-	2.2	9.6	11.8	1.0	9.5
Registered nurse	40.9	38.9	461.8	541.6	47.4	9.5
Nurses total	40.9	41.1	471.4	553.5	48.4	9.5
Medical practitioners						
Psychiatrist	3.5	1.0	65.9	70.4	6.2	9.4
Resident medical officer	-	23.5	28.3	51.7	4.5	6.2
Other medical practitioner	0.7	-	7.1	7.7	0.7	9.7
Medical practitioners total	4.2	24.5	101.2	129.9	11.4	8.1
Clinical roles total	95.1	88.8	682.0	865.9	75.7	9.4
Non-clinical roles						
Support workers	2.8	23.9	153.5	180.2	15.8	10.0
Non-clinical roles total	2.8	23.9	153.5	180.2	15.8	10.0
Administration & management						
Administration and technical support	2.4	2.8	58.8	64.0	5.6	5.9
Managers and team leaders	4.6	1.1	-0.0	5.6	0.5	5.9
Nurse managers	1.8	11.0	14.6	27.4	2.4	9.5
Admin & management total	8.8	14.9	73.3	97.0	8.5	6.9
Grand Total	106.7	127.6	908.8	1,143.1	100.0	9.3

Table 9. Central region, estimated DHB adult mental health and addiction workforce (FTEs employed plus vacant) by roles and services delivered

Role (group)	DHB workforce (FTEs)				Proportion of DHB workforce (%)	Vacancy rate (%)
	AOD	Forensic mental health	Mental health	Total		
Clinical roles						
Allied health roles						
Addiction practitioner	26.3	-	-0.0	26.3	2.0	-
Occupational therapist	-	10.4	24.2	34.6	2.6	7.4
Psychologist	5.5	8.3	29.3	43.1	3.2	7.4
Social worker	21.6	6.7	39.8	68.0	5.1	7.4
Other allied health	3.0	-	0.0	3.0	0.2	7.4
Allied health roles total	56.5	25.4	93.3	175.1	13.1	6.3
Nurses					-	
Enrolled nurse	-	-	12.3	12.3	0.9	1.5
Registered nurse	43.8	94.6	460.0	598.5	44.7	1.5
Nurses total	43.8	94.6	472.3	610.8	45.6	1.5
Medical practitioners					-	
Psychiatrist	5.4	8.3	56.3	70.1	5.2	3.2
Resident medical officer	-	9.2	39.7	48.8	3.7	5.2
Other medical practitioner	1.0	-	3.4	4.4	0.3	5.7
Medical practitioners total	6.5	17.5	99.4	123.3	9.2	4.1
Clinical roles total	106.7	137.5	665.0	909.2	67.9	2.4
Non-clinical roles					-	
Support workers	5.7	47.8	160.2	213.7	16.0	1.9
Non-clinical roles total	5.7	47.8	160.2	213.7	16.0	1.9
Administration & management					-	
Administration and technical support	3.1	2.1	150.4	155.6	11.6	1.7
Managers and team leaders	7.1	13.7	1.8	22.6	1.7	1.7
Nurse managers	1.0	6.9	29.1	36.9	2.8	1.5
Admin & management total	11.2	22.7	181.3	215.2	16.1	1.7
Grand Total	123.6	208.0	1,006.5	1,338.1	100.0	2.5

Table 10. South Island region, estimated DHB adult mental health and addiction workforce (FTEs employed plus vacant) by roles and services delivered

Role (group)	DHB workforce (FTEs)				Proportion of DHB workforce (%)	Vacancy rate (%)
	AOD	Forensic mental health	Mental health	Total		
Clinical roles						
Allied health roles						
Addiction practitioner	31.2	-	0.0	31.2	2.1	2.8
Occupational therapist	-	5.1	31.3	36.4	2.4	5.2
Psychologist	2.0	6.4	46.5	54.9	3.6	5.2
Social worker	9.6	4.2	45.0	58.8	3.9	5.2
Other allied health	1.1	-	15.2	16.3	1.1	5.2
Allied health roles total	43.9	15.7	138.1	197.7	13.1	4.8
Nurses					-	
Enrolled nurse	2.0	8.9	78.5	89.4	5.9	4.1
Registered nurse	66.2	128.9	542.4	737.5	48.8	4.1
Nurses total	68.2	137.7	620.9	826.9	54.7	4.1
Medical practitioners					-	
Psychiatrist	6.2	8.8	48.8	63.7	4.2	13.1
Resident medical officer	1.0	-	49.4	50.4	3.3	0.2
Other medical practitioner	2.6	-	9.2	11.9	0.8	8.4
Medical practitioners total	9.8	8.8	107.4	126.0	8.3	7.5
Clinical roles total	121.9	162.2	866.4	1,150.6	76.1	4.6
Non-clinical roles					-	
Support workers	2.0	37.8	113.5	153.3	10.1	3.7
Non-clinical roles total	2.0	37.8	113.5	153.3	10.1	3.7
Administration & management					-	
Administration and technical support	12.0	9.1	116.2	137.3	9.1	3.1
Managers and team leaders	5.7	2.1	2.4	10.2	0.7	3.1
Nurse managers	1.4	6.3	52.3	59.9	4.0	4.1
Admin & management total	19.1	17.4	170.9	207.5	13.7	3.4
Grand Total	143.1	217.4	1,150.8	1,511.3	100.0	4.3

Table 11. *Estimated DHB adult mental health and addiction FTE workforce (employed plus vacant) per 100,000 adult population, by region*

DHB region	Service delivery workforce per 100,000 adults		Administration & management per 100,000 adults	FTE workforce per 100,000 adults	Adult population (20+ years)
	Clinical workforce	Non-clinical workforce			
Northern	136.9	33.1	20.5	190.6	1,369,630
Midland	130.9	27.2	14.7	172.8	661,535
Central	135.4	31.8	32.0	199.3	671,555
South Island	137.1	18.3	24.7	180.1	839,030
Total workforce	135.5	28.3	22.6	186.4	3,541,750

Source: Statistics New Zealand (2017).

Table 12. *Total reported recruitment and resignations and respective workforce growth or contraction for the year ended 31 March 2018*

Role (group)	FTEs recruited	Proportion of reported workforce (%)	FTEs resigned	Proportion of reported workforce (%)	Growth (decrease) in FTEs
Allied health	250.9	14.6	215.3	12.5	35.6
Nurses	508.2	14.3	351.8	9.9	156.4
Medical practitioners*	68.2	12.8	56.1	10.5	12.0
Resident medical officers*	151.8	64.8	118.0	50.4	33.8
Support workers	146.1	13.5	142.1	13.2	4.0
Administration & management	82.3	11.0	72.4	9.7	9.9
Total workforce	1,207.4	15.4	955.7	12.2	251.7

Note: proportions are calculated using all employee information received from HWIP, including employees working in CAMHS.

Medical practitioners are reported separately from resident medical officers due to the latter group's short-term employment conditions.

Appendix C: DHB workforce by services

Table 13. *Estimated DHB adult AOD workforce (FTEs employed plus vacant) by roles and region*

Role (group)	AOD workforce (FTEs) by region				Total AOD workforce (FTEs)	Proportion of AOD workforce (%)
	Northern	Midland	Central	South Island		
Clinical roles						
Allied health roles						
Addiction practitioner	79.4	34.5	26.3	31.2	171.3	27.6
Occupational therapist	2.2	-	-	-	2.2	0.3
Psychologist	5.1	2.8	5.5	2.0	15.4	2.5
Social worker	41.2	10.8	21.6	9.6	83.2	13.4
Other allied health	10.8	2.0	3.0	1.1	16.9	2.7
Allied health roles total	138.6	50.0	56.5	43.9	289.0	46.5
Nurses						
Enrolled nurse	-	-	-	2.0	2.0	0.3
Registered nurse	60.2	40.9	43.8	66.2	211.1	34.0
Nurses total	60.2	40.9	43.8	68.2	213.1	34.3
Medical practitioners						
Psychiatrist	16.5	3.5	5.4	6.2	31.7	5.1
Resident medical officer	1.0	-	-	1.0	2.0	0.3
Other medical practitioner	2.0	0.7	1.0	2.6	6.3	1.0
Medical practitioners total	19.5	4.2	6.5	9.8	39.9	6.4
Clinical roles total	218.3	95.1	106.7	121.9	542.0	87.3
Non-clinical roles						
Support workers	5.4	2.8	5.7	2.0	16.0	2.6
Non-clinical roles total	5.4	2.8	5.7	2.0	16.0	2.6
Administration & management						
Administration and technical support	12.8	2.4	3.1	12.0	30.4	4.9
Managers and team leaders	8.2	4.6	7.1	5.7	25.6	4.1
Nurse managers	2.7	1.8	1.0	1.4	6.9	1.1
Admin & management total	23.7	8.8	11.2	19.1	62.9	10.1
Grand Total	247.4	106.7	123.6	143.1	620.8	100.0
<i>Proportion of AOD workforce</i>	<i>40%</i>	<i>17%</i>	<i>20%</i>	<i>23%</i>	<i>100%</i>	

Table 14. *Estimated DHB adult forensic mental health workforce (FTEs employed plus vacant) by roles and region*

Role (group)	Forensic mental health workforce (FTEs) by region				Total forensic workforce (FTEs)	Proportion of forensic workforce (%)
	Northern	Midland	Central	South Island		
Clinical roles						
Allied health roles						
Addiction practitioner	-	1.9	-	-	1.9	0.2
Occupational therapist	19.3	11.7	10.4	5.1	46.5	4.7
Psychologist	18.6	6.2	8.3	6.4	39.6	4.0
Social worker	17.7	3.3	6.7	4.2	31.9	3.2
Other allied health	1.6	-	-	-	1.6	0.2
Allied health roles total	57.2	23.2	25.4	15.7	121.5	12.3
Nurses						
Enrolled nurse	4.3	2.2	-	8.9	15.4	1.6
Registered nurse	171.4	38.9	94.6	128.9	433.8	43.9
Nurses total	175.7	41.1	94.6	137.7	449.3	45.4
Medical practitioners						
Psychiatrist	20.1	1.0	8.3	8.8	38.1	3.9
Resident medical officer	11.0	23.5	9.2	-	43.6	4.4
Other medical practitioner	0.5	-	-	-	0.5	0.1
Medical practitioners total	31.6	24.5	17.5	8.8	82.3	8.3
Clinical roles total	264.5	88.8	137.5	162.2	653.0	66.1
Non-clinical roles						
Support workers	117.3	23.9	47.8	37.8	226.9	23.0
Non-clinical roles total	117.3	23.9	47.8	37.8	226.9	23.0
Administration and technical support	39.7	2.8	2.1	9.1	53.6	5.4
Managers and team leaders	5.4	1.1	13.7	2.1	22.2	2.2
Nurse managers	8.6	11.0	6.9	6.3	32.8	3.3
Admin & management total	53.6	14.9	22.7	17.4	108.6	11.0
Grand Total	435.5	127.6	208.0	217.4	988.5	100.0
<i>Proportion of forensic mental health workforce</i>	<i>44%</i>	<i>13%</i>	<i>21%</i>	<i>22%</i>	<i>100%</i>	

Table 15. *Estimated DHB adult mental health workforce (FTEs employed plus vacant) by roles and region*

Role (group)	Mental health workforce (FTEs) by region				Total mental health workforce (FTEs)	Proportion of mental health workforce (%)
	Northern	Midland	Central	South Island		
Clinical roles						
Allied health roles						
Addiction practitioner	12.7	-	-	-	12.7	0.3
Occupational therapist	75.6	38.4	24.2	31.3	169.5	3.4
Psychologist	103.7	45.3	29.3	46.5	224.8	4.5
Social worker	153.4	25.7	39.8	45.0	263.8	5.3
Other allied health	-	-	-	15.2	15.2	0.3
Allied health roles total	345.4	109.4	93.3	138.1	686.1	13.7
Nurses						
Enrolled nurse	23.8	9.6	12.3	78.5	124.3	2.5
Registered nurse	783.1	461.8	460.0	542.4	2,247.4	45.0
Nurses total	807.0	471.4	472.3	620.9	2,371.7	47.5
Medical practitioners						
Psychiatrist	134.0	65.9	56.3	48.8	304.9	6.1
Resident medical officer	71.2	28.3	39.7	49.4	188.6	3.8
Other medical practitioner	34.9	7.1	3.4	9.2	54.6	1.1
Medical practitioners total	240.1	101.2	99.4	107.4	548.1	11.0
Clinical roles total	1,392.4	682.0	665.0	866.4	3,605.8	72.2
Non-clinical roles						
Support workers	331.2	153.5	160.2	113.5	758.4	15.2
Non-clinical roles total	331.2	153.5	160.2	113.5	758.4	15.2
Administration and technical support	170.8	58.8	150.4	116.2	496.2	9.9
Managers and team leaders	4.9	-	1.8	2.4	9.1	0.2
Nurse managers	27.9	14.6	29.1	52.3	123.8	2.5
Admin & management total	203.6	73.3	181.3	170.9	629.1	12.6
Grand Total	1,927.2	908.8	1,006.5	1,150.8	4,993.3	100.0
<i>Proportion of mental health workforce</i>	<i>39%</i>	<i>18%</i>	<i>20%</i>	<i>23%</i>	<i>100%</i>	

Appendix D: Funding, population and service use

Mental health and addiction expenditure

For the year ended June 2017, mental health and addiction expenditure for DHB provider arm services totalled \$841 million. This represented a 16 per cent increase on the expenditure of 2012/13 (\$726 million) overall. There was a 27 per cent increase in expenditure for AOD services, 6 per cent increase for forensic mental health services and 16 per cent increase for mental health services. The relative proportion of mental health and addiction expenditure received by DHBs was 73 per cent, which was about the same as in 2012/13 (72 per cent); see Table 16.

Table 16. *Comparison of DHB adult mental health and addiction service delivery expenditure for years ended 30 June 2013 and 2017*

Year	AOD expenditure (\$)	Forensic mental health expenditure (\$)	Mental health expenditure (\$)	Total DHB expenditure (\$)	DHB as proportion of health funding
2016/17	79,061,674	109,085,921	652,302,551	840,450,146	72.5%
2012/13	62,393,122	103,078,815	560,229,401	725,701,338	71.9%
Change	26.7%	5.8%	16.4%	15.8%	

Source: Ministry of Health Price Volume Schedule 2012/13, 2016/17.

Note: includes expenditure for services to adults and dedicated MHSOP.

The average DHB mental health and addiction expenditure per adult in the population (based on people aged 20 years and older) was \$237.30. This represented an overall increase of 5 per cent (\$11.96 per adult) compared to 2013.

Mental health and addiction expenditure varied by region and service. The Northern region had the highest rate of expenditure per adult for services overall (\$248.69 per person) and the highest for AOD and mental health services (\$21.30 and \$195.04 per person respectively). The Central region had the highest rate for forensic mental health services (\$33.90 per person); see Table 17.

Table 17. *DHB funding per adult (aged 20 years and older) by regions*

Region	AOD (\$ per adult)	Forensic mental health (\$ per adult)	Mental health (\$ per adult)	Total DHB (\$ per adult)	Proportion of DHB expenditure (%)
Northern	21.30	32.35	195.04	248.69	40.5
Midland	18.52	28.94	178.97	226.44	17.8
Central	16.83	33.90	164.03	214.76	17.2
South Island	19.16	26.99	168.69	214.84	21.4
Ministry of Health	2.90	0.06	4.26	7.22	3.0
Funding \$ per adult	22.32	30.80	184.18	237.30	100.0

Source: Ministry of Health Price Volume Schedule 2016/17.

Note: includes expenditure for services to adults and dedicated MHSOP.

Population

In 2017, New Zealand's adult (people aged 20 years and older) population had increased by 10 per cent from 2013 (up to 3.5 million people compared to 3.2 million in 2013). Māori adults comprised 12 per cent of the adult population; adults from Pasifika ethnic groups comprised 5 per cent; adults from Asian ethnic groups were 14 per cent; and all other adults were 68 per cent of the population; see below.

Table 18. Comparison of New Zealand adult population (aged 20 years and older) 2017 and 2013, by ethnic groups

Adults (20 years and older)	2017 adult population	2017 proportion of adult population (%)	2013 adult population	2013 proportion of adult population (%)	Change (%)
Māori people	432,230	12.2	390,440	12.1	10.7
Pasifika ethnic groups	191,470	5.4	169,920	5.3	12.7
Asian ethnic groups	511,530	14.4	383,255	11.9	33.5
Other peoples	2,406,520	67.9	2,276,920	70.7	5.7
Total adults	3,541,750	100.0	3,220,535	100.0	10.0

Source: Statistics New Zealand (2017).

The Northern region had the largest share of the population (39 per cent), followed by the South Island region (24 per cent each), and the Central and Midland regions (19 per cent each). Of the regions, the population in the Northern region grew the most (14 per cent) over the 4 years from 2013, and the Central region grew least (6 per cent); see Table 19.

Table 19. Comparison of New Zealand adult population (aged 20 years and older) 2017 and 2013, by regions

Region	2017 adult population	2017 proportion of adult population (%)	2013 adult population	2013 proportion of adult population (%)	Change (%)
Northern	1,369,630	38.7	1,201,450	37.3	14.0
Midland	661,535	18.7	610,770	19.0	8.3
Central	671,555	19.0	631,310	19.6	6.4
South Island	839,030	23.7	777,005	24.1	8.0
Total adults	3,541,750	100.0	3,220,535	100.0	10.0

Source: Statistics New Zealand (2017).

Overall, the DHB adult mental health and addiction workforce per 100,000 adults in the population decreased between 2014 and 2018 by 1.8 FTEs (about 1 per cent). The mental health workforce was the only workforce to increase its ratio of workforce to population; see Table 20. The decline in the

rate of AOD workforce to population may be related to changes in the method of data collection and estimation, however.

Table 20. *Ratio of 2014 and 2018 workforce per 100,000 population the previous year*

Workforce	2014 workforce per 100,000 adults (FTEs)	2018 workforce per 100,000 adults (FTEs)	Difference (FTEs)	Difference (%)
AOD	20.6	17.5	-3.1	-15.0
Forensic mental health	29.2	27.9	-1.3	-4.5
Mental health	138.3	141.0	2.7	1.9
Mental health and addiction	188.2	186.4	-1.8	-1.0

Source: Statistics New Zealand (2017).

Service use

In 2017, mental health and addiction services saw 133,303 unique people aged 18 years and older. Of those people, DHBs saw 109,844 (82 per cent), with or without being seen by NGO services as well; see Table 21. The ratio of DHB workforce to people accessing services was 601 FTEs per 10,000 people seen.

Table 21. *People seen by DHB mental health and addiction services in 2017*

Age group	People seen by DHBs only	People seen by DHBs & NGOs	No. people seen by DHBs	Total people accessing services	People seen by DHBs as proportion of total people (%)
18 to 19 years	5,002	1,466	6,468	7,765	83.3
20 to 64 years	66,085	25,198	91,283	112,136	81.4
65 years and older	10,630	1,463	12,093	13,402	90.2
Total people seen	81,717	28,127	109,844	133,303	82.4

Note: People aged 18 years and older, with any type of activity excluding do not attends and leave.

Source: Ministry of Health, PRIMHD extract 9 April 2018, extracted and formatted by Te Pou.

Over 28,000 people were seen by DHB AOD services. This reflected 63 per cent of all people accessing AOD services. Most (85 per cent) people accessing DHB AOD services, were seen by DHBs only. Around 15 per cent were seen by AOD services in both NGOs and DHBs; see Table 22.

Table 22. *People seen by DHB AOD services in 2017*

Age group	People seen by DHBs only	People seen by DHBs & NGOs	No. people seen by DHBs	Total people accessing AOD services	People seen by DHBs as proportion of total people (%)
18 to 19 years	987	128	1,115	2,130	52.3
20 to 64 years	22,134	4,134	26,268	41,413	63.4
65 years and older	699	52	751	1,070	70.2
Total people seen	23,820	4,314	28,134	44,613	63.1

Note: People aged 18 years and older, with any type of activity excluding do not attends and leave.

Source: Ministry of Health, PRIMHD extract 9 April 2018, extracted and formatted by Te Pou.

Nearly 90,000 people were seen by DHB mental health services. This reflected 88 per cent of all people accessing mental health services. More than three-quarters (77 per cent) of people accessing DHB mental health services were seen by DHBs only; see Table 23.

Table 23. *People seen by DHB mental health services in 2017*

Age group	People seen by DHBs only	People seen by DHBs & NGOs	No. people seen by DHBs	Total people accessing mental health services	People seen by DHBs as proportion of total people (%)
18 to 19 years	4,687	1,106	5,793	6,448	89.8
20 to 64 years	54,057	18,492	72,549	83,529	86.9
65 years and older	10,142	1,369	11,511	12,576	91.5
Total people seen	68,886	20,967	89,853	102,553	87.6

Notes:

People aged 18 years and older, with any type of activity excluding do not attends and leave.

Includes 6,882 people seen by forensic mental health services.

Source: Ministry of Health, PRIMHD extract 9 April 2018, extracted and formatted by Te Pou.

Overall, the DHB adult mental health and addiction workforce per 10,000 people seen by services decreased between 2014 and 2018 by 28 FTEs (about 5 per cent); see Table 24.

Table 24. *Ratio of 2014 and 2018 workforce per 10,000 people seen by DHB services the previous year*

Workforce	2014 workforce per 10,000 people seen (FTEs)	2018 workforce per 10,000 people (FTEs)	Difference (FTEs)	Difference (%)
AOD	68.9	56.5	-12.4	-18.0
Forensic mental health*	-	-	-	-
Mental health	462.8	454.6	-8.2	-1.8
Mental health and addiction	629.5	601.1	-28.4	-4.5

Source: Ministry of Health, PRIMHD extract 9 April 2018, extracted and formatted by Te Pou.

* the ratio of workforce to people seen by forensic mental health services was not calculated due to the unique nature of these services.

Table 25. 2017 adult (aged 20 years and older) population by ethnic group and DHB-locality

DHB locality & region	Māori people	Pasifika ethnic groups	Asian ethnic groups	Other groups	Total adults
Northern					
Northland	33,820	2,120	4,960	85,820	126,720
Waitematā	34,410	26,670	96,430	292,300	449,810
Auckland	27,850	35,980	134,390	208,680	406,900
Counties Manukau	48,210	70,390	101,480	166,120	386,200
Northern region total	144,290	135,160	337,260	752,920	1,369,630
Midland					
Waikato	52,390	7,510	27,520	207,180	294,600
Bay of Plenty	32,700	2,470	11,730	123,110	170,010
Tairāwhiti	14,290	770	945	17,290	33,295
Lakes	21,680	1,580	6,450	47,990	77,700
Taranaki	12,550	830	3,770	68,780	85,930
Midland region total	133,610	13,160	50,415	464,350	661,535
Central					
Hawke's Bay	23,390	3,550	5,500	85,610	118,050
Whanganui	9,800	940	1,730	34,360	46,830
MidCentral	19,580	2,940	9,540	97,290	129,350
Hutt Valley	14,590	7,230	12,140	74,450	108,410
Wairarapa	4,370	510	905	27,440	33,225
Capital & Coast	21,680	14,180	33,260	166,570	235,690
Central region total	93,410	29,350	63,075	485,720	671,555
South Island					
Nelson Marlborough	8,730	1,400	4,470	98,190	112,790
West Coast	2,280	245	770	21,270	24,565
Canterbury	28,890	8,030	38,330	338,440	413,690
South Canterbury	2,720	365	1,570	40,570	45,225
Southern	18,300	3,760	15,640	205,060	242,760
South Island region total	60,920	13,800	60,780	703,530	839,030
Total contracts	432,230	191,470	511,530	2,406,520	3,541,750

Source: Statistics New Zealand (2017).

Table 26. People aged 18 years and older seen by DHB mental health and addiction services, by DHB-locality

DHB locality & region	DHBs only	DHBs & NGOs	Total people seen by DHBs	Proportion of total people accessing services (%)*
Northern				
Northland	3,841	1,327	5,168	85.6
Waitematā	21,105	2,608	23,713	95.8
Auckland	7,847	1,797	9,644	80.3
Counties Manukau	6,847	2,725	9,572	79.7
Northern region total	34,137	9,728	43,865	91.1
Midland				
Waikato	6,653	3,515	10,168	76.7
Bay of Plenty	5,367	1,554	6,921	76.5
Tairāwhiti	1,254	237	1,491	91.2
Lakes	1,890	758	2,648	63.1
Taranaki	2,451	945	3,396	85.2
Midland region total	16,814	7,086	23,900	77.0
Central				
Hawke's Bay	3,464	904	4,368	83.1
Whanganui	2,056	588	2,644	90.7
MidCentral	3,107	1,202	4,309	75.1
Hutt Valley	2,828	604	3,432	81.9
Wairarapa	473	220	693	44.7
Capital & Coast	7,917	1,832	9,749	80.5
Central region total	17,401	5,514	22,915	80.0
South Island				
Nelson Marlborough	3,774	594	4,368	96.8
West Coast	1,045	132	1,177	95.5
Canterbury	5,531	3,626	9,157	63.4
South Canterbury	1,536	131	1,667	94.0
Southern	5,391	1,119	6,510	78.6
South Island region total	16,365	5,713	22,078	75.6
Total people seen	81,717	28,127	109,844	82.4

Source: Ministry of Health, PRIMHD extract 9 April 2018, extracted and formatted by Te Pou.

* Adults accessing services across all mental health and addiction providers totalled 133,303.

Table 27. People aged 18 years and older seen by DHB AOD services, by DHB-locality

DHB locality & region	DHBs only	DHBs & NGOs	Total people seen by DHBs	Proportion of total people accessing services (%)*
Northern				
Northland	1,476	295	1,771	71.1
Waitematā	12,473	376	12,849	97.2
Auckland	0	0	0	-
Counties Manukau	0	0	0	-
Northern region total	12,611	1,944	14,555	84.3
Midland				
Waikato	1,436	331	1,767	42.6
Bay of Plenty	1,196	406	1,602	57.3
Tairāwhiti	599	3	602	90.5
Lakes	114	10	124	8.8
Taranaki	804	122	926	74.1
Midland region total	4,032	946	4,978	49.8
Central				
Hawke's Bay	1,146	38	1,184	96.7
Whanganui	921	51	972	91.3
MidCentral	785	122	907	45.6
Hutt Valley	12	4	16	3.3
Wairarapa	0	0	0	-
Capital & Coast	786	138	924	28.0
Central region total	3,455	479	3,934	48.4
South Island				
Nelson Marlborough	1,605	21	1,626	97.8
West Coast	336	0	336	99.4
Canterbury	863	410	1,273	23.4
South Canterbury	421	45	466	99.1
Southern	1,244	189	1,433	59.0
South Island region total	4,201	776	4,977	49.9
Total people seen	23,820	4,314	28,134	63.1

Source: Ministry of Health, PRIMHD extract 9 April 2018, extracted and formatted by Te Pou.

* Adults accessing AOD services across all providers totalled 44,613.

Table 28. People aged 18 years and older seen by DHB mental health services, by DHB-locality

DHB locality & region	DHBs only	DHBs & NGOs	Total people seen by DHBs	Proportion of total people accessing services (%)*
Northern				
Northland	2,691	960	3,651	93.2
Waitematā	10,383	2,176	12,559	94.3
Auckland	8,033	1,616	9,649	92.9
Counties Manukau	6,998	2,581	9,579	89.3
Northern region total	25,152	7,484	32,636	93.3
Midland				
Waikato	6,541	2,638	9,179	85.3
Bay of Plenty	4,906	1,025	5,931	82.7
Tairāwhiti	769	228	997	91.0
Lakes	1,923	623	2,546	83.3
Taranaki	1,925	780	2,705	86.4
Midland region total	15,393	5,302	20,695	84.7
Central				
Hawke's Bay	3,059	834	3,893	80.9
Whanganui	1,387	469	1,856	85.8
MidCentral	2,691	954	3,645	85.9
Hutt Valley	2,900	532	3,432	89.5
Wairarapa	536	157	693	65.7
Capital & Coast	7,990	1,218	9,208	94.3
Central region total	16,380	4,189	20,569	87.6
South Island				
Nelson Marlborough	2,572	544	3,116	95.7
West Coast	834	124	958	94.0
Canterbury	5,712	2,492	8,204	74.9
South Canterbury	1,196	88	1,284	92.5
Southern	4,736	752	5,488	84.4
South Island region total	14,446	4,015	18,461	82.1
Total people seen	68,886	20,967	89,853	87.6

Source: Ministry of Health, PRIMHD extract 9 April 2018, extracted and formatted by Te Pou.

* Adults accessing mental health services across all providers totalled 102,553.

Appendix E: Workforce comparisons 2018 to 2014

Table 29. Change in estimated DHB mental health and addiction workforce since 2014, by roles

Role (group)	2014 workforce (FTEs)	2018 workforce (FTEs)	Difference	
			FTEs	%
Clinical roles				
Allied health				
Addiction practitioner	184.6	185.9	1.3	0.7
Occupational therapist	219.4	218.1	-1.3	-0.6
Psychologist	272.1	279.8	7.7	2.8
Social worker	356.5	378.9	22.4	6.3
Other allied health roles	69.8	33.8	-36.0	-51.6
Allied health total	1,102.4	1,096.6	-5.8	-0.5
Nurses				
Enrolled nurse	66.4	141.7	75.3	113.4
Registered nurse*	2,794.1	2,892.3	98.2	3.5
Nurses total	2,860.5	3,034.0	173.5	6.1
Medical practitioners				
Psychiatrist	322.2	374.7	52.5	16.3
Resident medical officer	123.0	234.2	111.2	90.4
Other medical practitioner	144.7	61.4	-83.3	-57.6
Medical practitioner total	589.9	670.3	80.4	13.6
Clinical roles	4,552.8	4,800.8	248.0	5.4
Non-clinical roles				
Support worker	695.4	1,001.2	305.8	44.0
Non-clinical roles total	695.4	1,001.2	305.8	44.0
Administration & management				
Administration and technical support	426.3	580.2	153.9	36.1
Managers and team leaders	385.0	220.4	-164.6	-42.7
Administration & management total	811.3	800.6	-10.7	-1.3
Total workforce	6,059.5	6,602.7	543.2	9.0

* Registered nurses for 2014 includes 96 FTEs in unspecified other clinical roles.

Table 30. *Change in estimated DHB workforce in adult AOD, forensic mental health and mental health services since 2014, by roles*

Role (group)	Change in AOD workforce		Change in forensic mental health workforce		Total change in mental health workforce	
	FTEs	%	FTEs	%	FTEs	%
Allied health						
Addiction practitioner	9.2	5.7	-2.6	-57.8	-5.3	-29.3
Occupational therapist	-12.2	-85.0	13.4	40.3	-2.4	-1.4
Psychologist	-10.2	-40.0	8.0	25.2	10.0	4.7
Social worker	25.8	44.9	8.2	34.6	-11.6	-4.2
Other allied health roles	0.6	3.9	-0.3	-14.2	-36.4	-70.5
Allied health total	13.2	4.8	26.7	28.1	-45.6	-6.2
Nurses						
Enrolled nurse	2.0	-	-3.5	-18.5	76.8	161.6
Registered nurse*	20.5	10.7	16.4	3.9	61.3	2.8
Nurses total	22.5	11.8	12.9	3.0	138.1	6.2
Medical practitioners						
Psychiatrist	0.0	-0.1	2.5	7.1	50.0	19.6
Resident medical officer	-8.9	-81.6	28.1	181.2	92.0	95.2
Other medical practitioner	-5.3	-46.1	-32.5	-98.4	-45.5	-45.4
Medical practitioner total	-14.3	-26.3	-1.9	-2.2	96.5	21.4
Clinical roles	21.4	4.1	37.7	6.1	188.9	5.5
Non-clinical roles						
Support worker	-27.9	-63.7	-6.3	-2.7	340.1	81.3
Non-clinical roles total	-27.9	-63.7	-6.3	-2.7	340.1	81.3
Administration & management						
Administration and technical support	-19.7	-39.3	15.9	42.0	157.7	46.6
Managers and team leaders	-15.8	-32.8	-0.6	-1.1	-148.1	-52.7
Administration & management total	-35.5	-36.1	15.3	16.4	9.5	1.5
Total workforce	-42.1	-6.3	46.7	5.0	538.5	12.1

Notes: Decreases in the 2018 AOD workforce size for support workers, psychologists, nurses and administration and management roles may be due to possible mis-reporting of mental health workforce in 2014; see the Discussion section of this report.

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