



Getting it right

A series of workforce planning
and development resources

Informing your planning

Using data sources
and metrics for
workforce planning

**Te Pou o te
Whakaaro Nui**



Getting it right series of resources

This document is one of the *Getting it right* series of workforce planning and development resources produced by Te Pou o te Whakaaro Nui.

The documents in this collection are available from our website, www.tepou.co.nz

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Introduction

The workforce planning process aims to estimate the number of people with the right capabilities (knowledge, skills, values and attitudes) needed in the future workforce to achieve population health objectives.⁴ This resource aims to support DHB and NGO managers of mental health and addiction services to inform their workforce planning activities with evidence, by:

1. using information from a broad range of data sources to inform planning activities
2. identifying some basic workforce metrics, and
3. stimulating thinking about how current data collection activities can be enhanced or augmented to better support future planning activities.

This resource is a supplement to *Getting it right – Workforce planning guide: Getting the right people and skills in the future workforce*.³² Readers wanting to understand more about the steps in the workforce planning process should refer to that guide, which is available at www.tepou.co.nz along with other resources in the *Getting it right* series.

Informing your planning has been written for people involved in workforce planning at an organisation or service level. However, its principles are applicable to people planning for networks and groups across a DHB-locality, regionally and nationally. It is not intended to be prescriptive, rather it aims to prompt thinking about how your organisation's context and activities are described in various data sources and how you might use this information to plan your future workforce.

What we mean by these terms

A **data source** is a repository of information that may be a specific dataset, database, spreadsheet or other collection.¹⁷

A **metric** is a quantifiable measure of organisation status or activity,¹⁸ for example the number of workers who are aged over 50 years as a proportion of the total workforce.

An **outcome** is a change in health, wellbeing and circumstances over time.²⁷

Workforce demand is the capacity, composition and capability required of the workforce to meet future service needs.³²

Workforce planning is the systematic identification, analysis and planning of future workforce needs based on population health needs and priorities to ensure the workforce is best fit to deliver future services.³²

Workforce supply is the capacity, composition and capability of the current workforce that is estimated will exist at the end of the workforce planning period based on current trends for recruitment, retention and attrition.³²

In addition, the following are described using these conventions.

- » **Data** is the unprocessed facts gathered - numbers, statistics or other measurements.
- » **Information** is the term used in this document to describe aggregated or otherwise processed data derived from a data source.

Why use numbers in workforce planning?

Appropriate use of information from various data sources benefits workforce planning activities by:

- » ensuring that future workforce decisions are informed by evidence to improve their effectiveness³²
- » leading to effective workforce development activities and better outcomes for people using services²⁴
- » leading to improved health policies and programmes organisationally, collectively, and nationally.^{7,36}

Using numerical information from various data sources provides the base information that enables people using a workforce planning process to do the following.

- » Combine population, consumer profile and service use, and prevalence information, with the direction set by national health strategy and policy,^{11,12} and organisation strategic plans. This helps to identify what type of services will be needed in the future and what capacity these will need to have.
- » Identify the workforce tasks and capabilities required to deliver those future services.
- » Convert those tasks and capabilities into **workforce demand** by quantifying the number and type of workforce personnel needed to deliver future services.
- » Estimate the current **workforce supply** by quantifying the size, composition and capability of the current workforce that will exist at the end by the planning period, if current recruitment and attrition trends continue.
- » Compare the **workforce supply** to the **workforce demand** and identify the gaps that need to be addressed through workforce development activities.³²

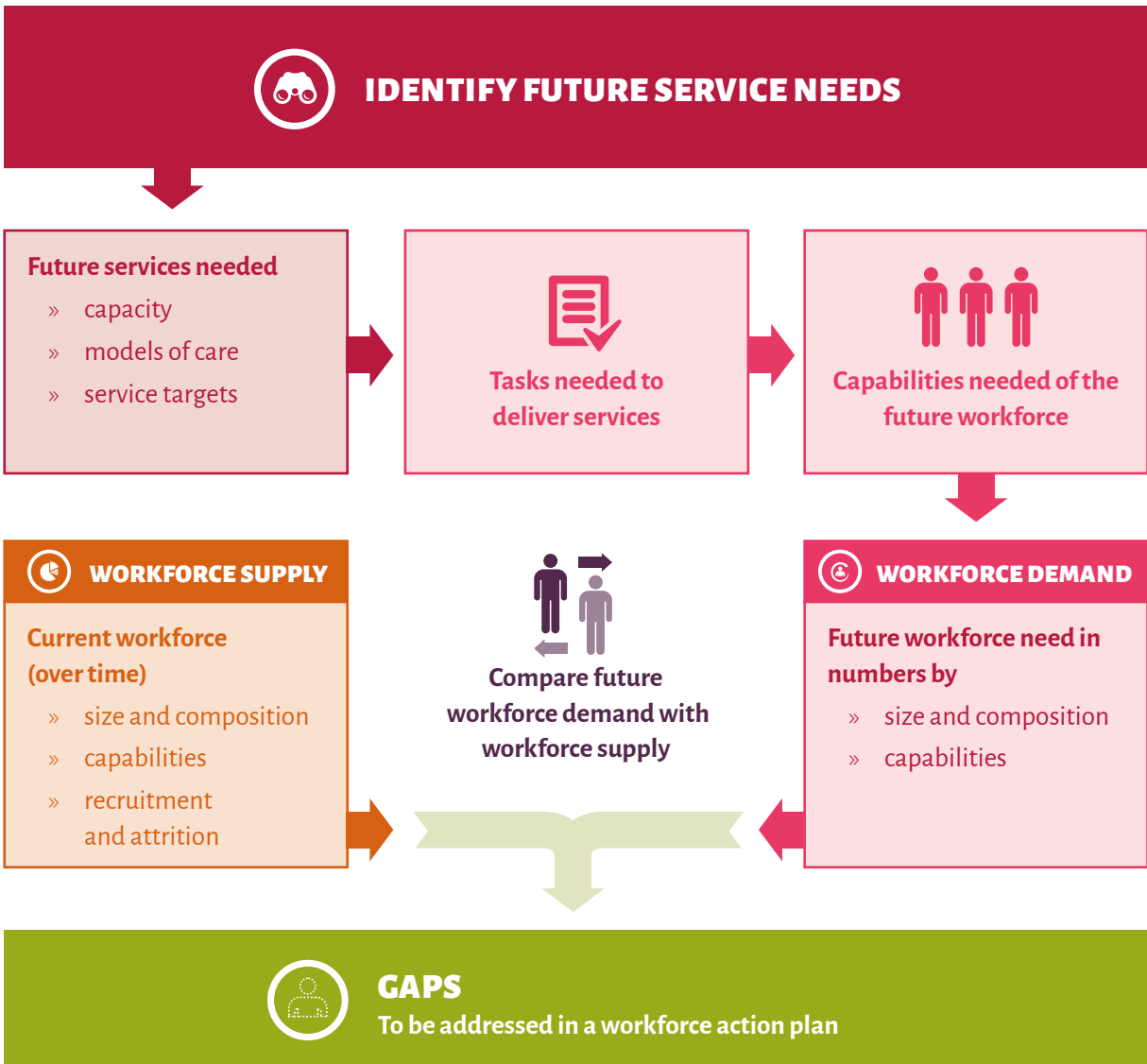
Figure 1 illustrates the flow of information from data sources, to estimating future service needs, workforce demand, and workforce supply.



INFORMATION INPUTS



PLANNING PROCESS



Adapted from Dreesch, 2005.³

Figure 1. Representation of the information flows through the workforce planning process.

What data sources are useful for workforce planning?

Useful data sources will vary depending on the scope and aims of your planning activities. There is no single best practice for choosing or using information to support workforce planning.¹ All workforce planning activities can benefit from the use of routinely-collected information such as that in:

- » population estimates and projections^{22,26}
- » organisation consumer and service use record systems (eg PRIMHD; World Health Organization Quality of Life [WHOQOL] tool)
- » organisation human resources systems
- » published service performance indicators^{10,13,15}
- » published workforce information^{2,9,20,23,25,29,33}

More information and links to online sources are provided in Table 1 of the Quick reference section at the end of this document.

The strategic direction of your organisation should inform the identification of useful data sources.^{1,8} Knowing the priority groups identified in policy and strategy, and relevant future-focused service or quality improvement plans will help to identify potential data sources of use for planning purposes, and to identify the relevant information these contain.

Answering the following questions will help to scope out the data sources available to support your plans, and determine the broad general categories about which you may need to find information.

» Who is the workforce plan being developed for?	<input type="checkbox"/>
» Do you have a service plan that outlines your organisation's future service direction that is underpinned by evidence? What data sources contributed to that evidence; and how can you access this information?	<input type="checkbox"/>
» Have any other organisational planning processes looked at data sources to inform decision-making about future services or workforce; what sources did these use; and how can you access this information?	<input type="checkbox"/>
» Who are the priority consumer groups for your service, and what information is available to describe their profile and their service use?	<input type="checkbox"/>
» What other data sources are currently available about your:	
▶ organisation or service delivery?	<input type="checkbox"/>
▶ consumers and their service use?	<input type="checkbox"/>
▶ current workforce?	<input type="checkbox"/>
» Who knows about these data sources' quality and utility, and how can these people support your planning process, eg PRIMHD coordinators, planners and funders?	<input type="checkbox"/>
» How reliable is the information in those data sources, and what are the limitations to their use?	<input type="checkbox"/>

➤ For better practice

The effectiveness of your planning processes can be improved by identifying its information needs and, if there are no existing data sources for that information, developing intentional and targeted data collection activities to capture that information.¹

Readily available data sources may not always provide information that meets your planning needs. To support better workforce planning, routinely-collected information should be regularly reviewed for its utility in workforce planning processes, and:

- » augmented by targeted data collection
- » analysed in ways that are specifically designed to support workforce planning activities
- » reported and shared across all planning functions in the organisation and across all levels of the organisation
- » benchmarked against other better practice organisations.¹

When reviewing routinely-collected information, consider:

- » how you will capture new information, and avoid changing the way existing information is captured
- » what data needs to be collected and how you will analyse it – it is important to collect the right data that provides useful information
- » seeking advice from those with expertise, eg data coordinators, analysts and researchers; staff members who regularly work with data; university academics and private consultants.

Population

Statistics New Zealand regularly updates and publishes a variety of information about the population, including population projections by age groups, gender and ethnic groups; household information, migration, employment, education and income.

The Ministry of Health annually receives updated DHB-locality population projections for 5 year age groups, and by gender and ethnic groups according to assumptions specified by the Ministry. This information in spreadsheet form is available on request from the Ministry of Health or from Te Pou. Links to population-based data sources such as the 2013 Population census and reports such as New Zealand mental health survey are provided in the quick reference section of this document.

Consumer and service use

There are a variety of consumer and service use information systems used by organisations delivering mental health and addiction services. The most commonly used database is the Programme for the Integration of Mental Health Data (PRIMHD). All Vote Health funded mental health and addiction services are required to submit data to PRIMHD.

The PRIMHD database captures demographic information about people accessing services and aspects of the services they receive. PRIMHD data is also used to report on what outcomes are being achieved for people accessing mental health and addiction services. Using information from PRIMHD enables better quality service planning and decision-making about services and workforce at the local, regional and national levels.²⁸ Links to reports utilising PRIMHD data are provided in the quick reference section.

Workforce

Individual human resources systems can provide a wealth of information about the demographic and service profile of current employees, as well as trends in recruitment and attrition. Aggregated workforce information at DHB-locality, regional and national levels is available from a number of workforce surveys. Links to relevant mental health and addiction workforce surveys are provided in the quick reference section.

Using data sources for workforce planning

There are many ways to use information contained in various data sources for workforce planning purposes. Just as there is no one best practice used to determine which data sources are appropriate, the methods through which this information is utilised will also vary according to each organisation's particular planning needs.

The following subsections describe key questions to consider during and after workforce planning to support thinking about how you might analyse relevant information to develop workforce metrics that inform decision-making.

Workforce metrics

A metric is a quantifiable measure of organisation activity, for example the number full-time equivalent (FTE) positions employed in the organisation. Using metrics for workforce planning supports evidence-informed decision-making about future workforce development activities.¹⁸ Metrics are derived by analysing information contained in one or more data sources. There are three common types of analyses used to derive metrics:

- » subgroups within a larger group, for example the workforce proportioned into different age ranges or by ethnicity
- » ratios comparing information across different data sources, for example access rates: the number of people seen per head of population
- » composite metrics based on a number of different data sources, for example FTE turnover (see Table 2).⁵

During planning

For effective workforce planning, it is helpful to develop metrics that describe, in numbers, relevant aspects of your organisation, its consumers, and workforce.¹⁸ Some examples of commonly used workforce planning metrics include:

- » workforce by age – particularly the proportion of all people in the workforce who are aged over 50 years, 55 years, 60 years, and over 65 years; to establish the workforce risks posed by an ageing workforce
- » workforce by ethnic group – particularly the proportion of employees who identify in priority service groups such as Māori people and people in Pasifika ethnic groups; to compare your workforce ethnicity profile against the profile of people who access your service
- » proportion of the workforce who trained overseas; to understand how reliant your service is on overseas-trained staff and determine the level of risk associated.

A range of common workforce supply metrics are provided in Table 2 of the Quick reference section at the end of this document.

The quality of metrics is determined by whether these:

- » use information that has been consistently collected so that it is comparable over time and location¹⁸
- » are based on analyses that are relevant to the issue these intend to represent, and are consistently applied.⁷

Some overarching questions to prompt thinking about useful metrics while working through the *Getting it right* workforce planning process³² include:

- » what appropriate metrics can be derived from the information in available data sources?
- » how can you meaningfully describe these metrics?
- » what measures can you put in place to ensure the quality of your metrics is maintained?
- » how do your metrics compare with other available information, and does this help to better understand your organisation's position in the sector? For example, how does the organisation's workforce age profile compare with that of other similar-sized organisations?

The following subsections describe more specific questions to support assessing workforce demand and workforce supply.

Assessing workforce demand

The following are some useful questions to consider when thinking about how you might describe your current services in numbers. This information may come from PRIMHD or other consumer record systems and tools like the WHOQOL tool.

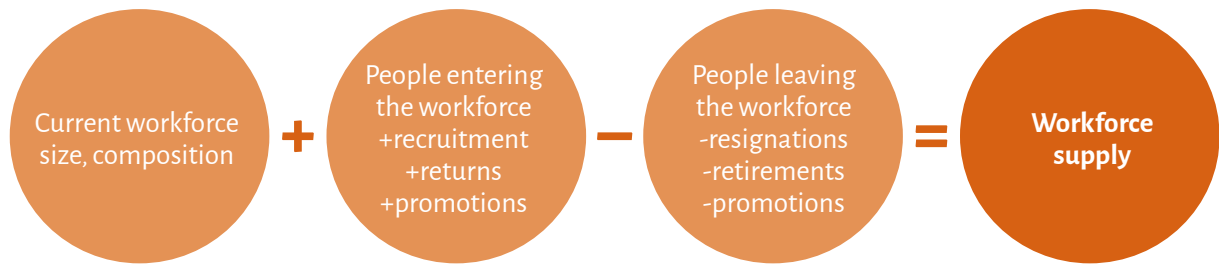
» What do current consumers look like – their age, gender, and ethnicity?	<input type="checkbox"/>
» What are consumers' health needs? How have these changed over time?	<input type="checkbox"/>
» How many consumers currently access your service? How often do they present over the course of the year?	<input type="checkbox"/>
» What is the maximum capacity of your current services, and its current utilisation?	<input type="checkbox"/>
» What are the pathways through the service, remembering to factor in admissions and readmissions, not just unique consumers?	<input type="checkbox"/>
» Other factors identified in service plans, eg outcomes achieved from different models of care, length of stay, waiting times?	<input type="checkbox"/>

The following are some useful questions to ask that describe how population changes might impact future demand for your services.

» At what rate will the population change over the period you are planning for?	<input type="checkbox"/>
» Will the rate of change be different for some groups in the population compared to others?	<input type="checkbox"/>
» How will population changes affect the number of people who are likely to present to your service?	<input type="checkbox"/>
» How will population changes affect the demographic profile of people presenting to your service?	<input type="checkbox"/>
» How will population changes affect the health needs of people presenting to your service?	<input type="checkbox"/>
» Will planned future service delivery changes affect who uses your service, and in what way?	<input type="checkbox"/>

Assessing workforce supply

Figure 2 describes the process of determining workforce supply. More information is provided in the *Getting it right* workforce planning guide.³²



Adapted from: Wan, 2011.³⁵

Figure 2. Workforce supply analysis model.

What information can you use to describe the following?

- » The current workforce size and composition.
- » The current workforce profile (age, gender, ethnicity, length of service).
- » The current workforce capabilities, eg using the *Real Skills: Online assessment tool*³⁰ or a training needs analysis.
- » Attrition trends, how many people can you expect to leave the organisation or change roles over the course of the planning period.
- » What proportion of the workforce identify in priority groups, eg Māori employees.



For ongoing monitoring and evaluation

Monitoring and evaluation are the last steps of the workforce planning process. These activities are important contributors to improving your future planning processes and their outcomes. For these steps, it is helpful to ask:

- » what metrics were used to inform your workforce planning processes?
- » in the future, which of the metrics you have used for planning can be used to assess the progress towards your planning goals over time?
- » what are prudent recommendations to make about implementing new or better targeted data collection activities to improve workforce planning effectiveness in the future?
- » how can you share metrics and learnings from your planning process with your peers to improve workforce planning awareness and capability in your organisation?

Summary

Making use of a variety of data sources and workforce metrics provides the evidence to support effective workforce planning and development. There is no single best practice for choosing or using information to support workforce planning. This resource has provided a series of questions and ideas to help identify the various data sources available at organisation or service-level, and to stimulate thinking about how these might be used to derive metrics to support workforce planning and development activities.

More information about workforce planning and development, and other useful resources are available from the [Te Pou website](#)

Quick reference: Data sources and metrics

This section provides information about a variety of data sources and metrics that people involved in workforce planning may find useful in the following order.

Table 1. Links to useful online data sources for workforce planning.

Table 2. List of useful workforce supply metrics for workforce planning.

Table 3. List of useful methods for determining future workforce demand.

Online data sources

Table 1 provides links to data sources that are published online and may prove useful for workforce planning.

Table 1. *Links to useful online data sources for workforce planning*

Population and prevalence	
Statistics New Zealand. 2013. <i>2013 Population Census</i> . Available from http://www.stats.govt.nz/Census/2013-census.aspx	<p>Population information:</p> <ul style="list-style-type: none">» national» regional authorities» territorial authorities. <p>Population by demographic characteristics:</p> <ul style="list-style-type: none">» age groups» ethnicity» gender. <p>Population projections.</p> <p>Other information including:</p> <ul style="list-style-type: none">» household information» migration» employment» education» income.

<p>Statistics New Zealand annual DHB population estimates and projections are available on request from the Ministry of Health and Te Pou.</p> <p><i>DHB population profiles 2017–2027: Statistics New Zealand population projections, 2016 update.</i> Auckland: Te Pou o te Whakaaro Nui.²⁵ Available from https://www.tepou.co.nz/initiatives/workforce-and-other-data-reports/194</p>	<p>Population information:</p> <ul style="list-style-type: none"> » national » by DHB-locality. <p>Population by demographic characteristics:</p> <ul style="list-style-type: none"> » age groups (0-19 years, 20-64, 65+) » ethnicity (Māori, Pasifika, Asian, other) » gender.
<p>Statistics New Zealand. <i>Quarterly labour market statistics.</i> Available from http://www.stats.govt.nz/browse_for_stats/income-and-work/employment_and_unemployment/labour-market-statistics-information-releases.aspx</p>	<p>Labour market statistics including:</p> <ul style="list-style-type: none"> » people employed and unemployed » hours worked » average earnings by sector.
<p>Oakley Browne, M. A., Wells, J. E., & Scott, K. M., (eds). (2006). <i>Te Rau Hinengaro: The New Zealand mental health survey.</i> Wellington: Ministry of Health.¹⁶ Available from http://www.health.govt.nz/publication/te-rau-hinengaro-new-zealand-mental-health-survey</p>	<p>Mental health and addiction prevalence rates.</p>
<p>Ministry of Health. (2016). <i>New Zealand health survey</i> various publications and online tools available from http://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/surveys/current-recent-surveys/new-zealand-health-survey</p>	<p>Annual updates of the New Zealand health survey providing information on health behaviours and risk factors, health conditions and access to health services.</p>
<p>Service access and outcomes</p>	
<p>PRIMHD summary tables. Available from http://www.health.govt.nz/publication/mental-health-and-addiction-service-use-2013-14</p>	<p>These tables cover: demographic and geographic information, client referral pathways, the types of services provided, the outcome of the services and legal status and diagnosis information.</p>
<p>Te Pou o te Whakaaro Nui. (2016). <i>PRIMHD summary report user guide – HoNOS 2016.</i> Hamilton: Te Pou o te Whakaaro Nui. Available from https://www.tepou.co.nz/outcomes-and-information/primhd/34</p>	<p>National outcomes information</p> <p>Individual reports are sent to reporting organisations.</p>

<p>Te Pou o te Whakaaro Nui. (2016). <i>Alcohol and drug outcome measure (ADOM) report</i>. Hamilton: Te Pou o te Whakaaro Nui. Available from https://www.tepou.co.nz/resources/adom-report---december-2016/776</p>	<p>National outcomes information.</p>
<p>Mental health, alcohol and other drug sector performance monitoring and improvement performance measures. Available from https://nsfl.health.govt.nz/accountability/performance-and-monitoring/mental-health-alcohol-and-drug-addiction-sector</p>	<p>PP6 Service access rates by DHB-locality. PP7 Relapse prevention plans. PP8 Waiting times.</p>
<p><i>Key performance indicators for the New Zealand mental health & addiction sector</i>. Available from http://www.mhakpi.health.nz/</p>	<p>Various key performance indicators for outcomes and service use for all DHBs.</p>
<p>Ministry of Health. (2016). <i>New Zealand health survey</i> various publications and online tools available from http://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/surveys/current-recent-surveys/new-zealand-health-survey</p>	<p>Annual updates of the New Zealand health survey providing information on health behaviours and risk factors, health conditions and access to health services.</p>
<p>Annual reports from the office of the Director of Mental Health. Available from http://www.health.govt.nz/about-ministry/corporate-publications/mental-health-annual-reports</p>	<p>Annual summary of consumer and service use information with national overview and by DHB-locality.¹⁴</p>
<p>Workforce supply</p>	
<p>Te Pou o te Whakaaro Nui. (2015). <i>Adult mental health and addiction workforce: 2014 survey of Vote Health funded services</i>. Auckland: Te Pou o te Whakaaro Nui.²³ Available from http://www.tepou.co.nz/initiatives/more-than-numbers-workforce-stocktake/19</p>	<p>Workforce information for 189 Vote Health funded adult mental health and addiction services:</p> <ul style="list-style-type: none"> » national <ul style="list-style-type: none"> ▸ mental health and addiction ▸ mental health ▸ addiction » regional » DHB-locality.

<p>The Werry Centre. (2015). <i>2014 Stocktake of infant, child and adolescent mental health and alcohol and other drug services in New Zealand</i>. Auckland: The Werry Centre for Child & Adolescent Mental Health Workforce Development, University of Auckland.³³ Available from http://www.werrycentre.org.nz/professionals/current-workforce-projects</p>	<p>National and regional workforce information for 99 Vote Health funded child and adolescent mental health and addiction services:</p> <ul style="list-style-type: none"> » national » regional.
<p>Te Pou o te Whakaaro Nui. (2017). <i>DHB mental health and addiction employees: 2016 profile</i>. Auckland: Te Pou o te Whakaaro Nui.²⁵ Available from https://www.tepou.co.nz/resources/dhb-mental-health-and-addiction-employees-2016-profile/791</p>	<p>DHB mental health and addiction employees (national, regional, DHB-size groups):</p> <ul style="list-style-type: none"> » demographic profile (age, gender, ethnicity) » length of service » FTE turnover.
<p><i>Key performance indicators for the New Zealand mental health & addiction sector</i>. Available from http://www.mhakpi.health.nz/</p>	<p>Various key performance indicators for all DHBs and selected NGOs, including:</p> <ul style="list-style-type: none"> » turnover » sick leave usage.
<p>DHB Shared Services. <i>District health board employed workforce quarterly reports</i>.⁶ Available from http://centraltas.co.nz/strategic-workforce-services/health-workforce-information-programme-hwip/</p>	<p>District health board employed workforce and demographic information by DHB and workforce groups across all areas of work. Some comparison to population.</p>
<p>Aotearoa New Zealand Association for Social Workers www.anzasw.nz</p> <p>Nursing Council of New Zealand www.nursingcouncil.org.nz</p> <p>New Zealand Nurses Organisation www.nzno.org.nz</p> <p>New Zealand Psychologists Board www.psychologistsboard.org.nz</p> <p>Occupational Therapy Board of New Zealand www.otboard.org.nz</p> <p>Royal Australian and New Zealand College of Psychiatrists www.ranzcp.org</p> <p>New Zealand Medical Association www.nzma.org.nz</p>	<p>Professional bodies produce various reports about registered health professionals in New Zealand.</p>

Workforce supply metrics

Workforce supply describes size, composition, profile, capability and mobility of the current workforce.

Table 2. List of useful workforce supply metrics for workforce planning

Metric	Description	Formula	Uses	Data sources
What is the size of the workforce and how does that translate into their availability for work?				
People employed	Total number of staff by occupation groups or roles, also called “headcount”.	.	Describes the number of people in the workforce. Is generally used to describe current employees and does not include vacancies. Provides the denominator for workforce profile metrics including proportion of employees in age groups, ethnic groups and by gender.	Individual organisations can access through human resources (HR) systems and payroll. For national, regional, and by DHB-locality: Mental health and addiction workforce surveys and reports. ^{9, 23, 25, 29, 33}
FTE positions	Total full-time equivalent positions per working week. Can be calculated including only employed positions, only vacant positions, or employed and vacant positions.	[Total number of hours that employees are paid to work] / [maximum paid hours in 1 week] eg 180 hours / 40 hours pw = 4.5 FTEs.	Describes the overall contribution of workforce positions in working hours per week. Provides the denominator for a number of metrics relating to occupation groupings.	HR systems and payroll. For national, regional, and by DHB-locality: Mental health and addiction workforce surveys and reports. ^{9, 23, 25, 29, 33}
Employment type	Proportion of the workforce in permanent, fixed term, contract or casual employment.			HR systems and payroll.

Metric	Description	Formula	Uses	Data sources
Absences – sick leave	Proportion of all paid time spent on sick leave.	$[\text{Total sick leave hours claimed in a period}] / [\text{total hours paid to all staff in the same period}]$.		HR systems and payroll. Mental health and addiction KPI framework. ¹⁰
Where is the workforce located, and what do they look like?				
Location	Workforce in FTEs or headcount located at each service, DHB-locality, region, or other relevant location.	Proportion of the total workforce in relevant locations.		For national, regional, and by DHB-locality: Mental health and addiction workforce surveys and reports. ^{9, 23, 25, 29, 33}
Occupation groups and job roles	Workforce in FTEs or headcount by relevant roles or occupation groups eg support workers, nurses, allied health workers, medical professionals.	Proportion of the total workforce in each relevant group.	Describes the distribution of the workforce across different role, occupation groups or other relevant categories eg job groups or families.	HR systems and payroll. For national, regional, and by DHB-locality: Mental health and addiction workforce surveys and reports. ^{9, 23, 25, 29, 33}
Age	Proportion of total people employed in various age groups eg <=49, 50-54, 55-59, 60-64, 65+ Average age of the workforce.		Useful for understanding how many employees are likely to retire in the next few years. Also useful for thinking about groups that may have changing employment eg due to parenting commitments, older workers wanting to work part time.	HR systems and payroll. Workforce surveys including demographic information. ^{9, 25, 29}

Metric	Description	Formula	Uses	Data sources
Gender	Proportion of total people employed by gender, useful categories include: male, female, other, unknown.		Useful for comparing current workforce gender distribution against consumer gender distribution for planning to improve gender representation.	HR systems and payroll. Workforce surveys including demographic information. ^{9, 25, 29}
Ethnicity	Proportion of total people employed by ethnic groups. Useful to use prioritised ethnicity in this order to match with other health data sources: Māori, Pasifika, Asian, other.		Useful for comparing current workforce ethnicity against consumer ethnicity for planning to improve representation in line with national health strategy and policy.	HR systems and payroll. Workforce surveys including demographic information. ^{9, 23, 25, 29}
Trained overseas	Proportion of total people employed who received their most relevant qualification to their role overseas.		Useful for understanding current reliance on overseas training workforce and for highlighting potential workforce risk associated with high reliance.	HR systems.

What are the skills and capabilities of the workforce? How might these change in the near future?

Qualifications	Proportion of people employed by relevant qualifications, eg health and disability qualifications.		Useful to understand current skill level in the workforce and determining how many people may need training and development.	HR systems. Workforce surveys including qualifications information. ⁹
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Metric	Description	Formula	Uses	Data Resources
In training	Proportion of people employed who are currently in training.		Contributes to understanding the future skill level of the workforce by determining how many people will have completed training during the planning period.	HR systems.
Capabilities	Measures of relevant capabilities, eg <i>Let's get real</i> : essential, practitioner, and leader levels.		Develops a picture of employees' current capabilities, is comparable with capability levels required to meet future service demand and enables thinking about future workforce development needs.	<i>Real skills: Online assessment tool</i> . ³⁰ Training needs analysis. ³¹

What are the recruitment and attrition trends for the workforce?

Recruitment (entries)	<p>Proportion of the current people employed, hired in a given period (internally and externally). May be categorised by:</p> <ul style="list-style-type: none"> » those trained in NZ or overseas » source of recruitment eg internal or external. <p>Can be calculated using FTEs or people employed, depending on the intended use of the metric.</p>	[Number of new hires in a period]/ [average number of employed positions in that period].	Helps to identify rate of entry into employment and by grouping can help to identify changes in established career pathways.	HR systems.
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Metric	Description	Formula	Uses	Data sources
Resignations (exits)	<p>Proportion of the current people employed who left in a given period. May be categorised by: promotions, resignations, retirements, and exit destination.</p> <p>Can be calculated using FTEs or people employed, depending on the intended use of the metric.</p>	[Number of people leaving the organisation in a period] / [average number of employed positions in that period].	Helps to identify rate of exit from employment and by grouping can help to identify changes in established career pathways.	HR systems.
Retirements	Proportion of exiting people who retired. Can be grouped by age ranges, eg people over 60 years.		Can help to identify current trends for the older workforce for workforce planning purposes.	HR systems.
FTE turnover	Proportion of total FTEs employed that were vacated during the year.	[total FTE positions vacated] / [average FTE employed] in the same period.	Can help to estimate how many of current FTE employees will need to be replaced during a given period.	HR systems. Workforce service profile. ^{10, 25}
Reasons for leaving employment	Reasons for leaving.		Helps identify if employee dissatisfaction is driving exits.	Exit interviews and surveys.

Methods for determining workforce demand

Table 3 summarises some common methods for determining future workforce demand, with advantages and limitations.

Table 3. *List of useful methods for determining future workforce demand*

Method	Description	Advantages	Limitations
Adjusted service-target approach	Identifies future health needs through combining epidemiological approaches with population demographic profile and service goals or targets.	Useful for specific programmes, addresses efficiency issues and provides for skill mix variations. Is able to utilise a capability approach.	Can require detailed workflow studies or expert assessment and opinion to work well on a large scale. Requires infrastructure to support ongoing workforce development.
Needs-based model (epidemiological approach)	Estimates future health needs in the population based on age and ethnicity-specific prevalence, and translates those into future workforce requirements using productivity norms and professional judgement.	Factors in addressing currently unmet need. Is independent of current health service models of care and utilisation.	Requires extensive information. Does not account for changes in technology or efficiency in allocation of resources. May project unattainable service and staff targets.
Utilisation model	Estimates future service demand by applying current rates of service utilisation to future population projections, for relevant demographic groups (eg age groups, ethnic groups).	Usually economically feasible as aligns with population-based funding models.	Assumes current models of care and workforce size and composition are adequate to meet future population health needs; reproduces the status quo. Requires extensive information.

Method	Description	Advantages	Limitations
Health workforce to population ratio	Specific worker to population ratios.	Quick and easy to apply and understand.	Provides no insight into personnel utilization. Does not allow to explore interactions between numbers, mix, distribution, productivity and outcomes.
Service target-based	Sets targets for the delivery of specific outcome-oriented health services. Converts those targets into workforce requirements by using staffing and productivity standards.	Easy to understand and enables users to assess interactions between variables.	Can perpetuate unrealistic assumptions and assumes that standards are able to be achieved.

Adapted from Dreesch, 2005; Roberfroid, 2009.^{3,21}

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