How Many Psychologists?

A Discussion Paper about the Number of Psychologists Needed in the Health Service in New Zealand

Source: Prepared by participants in the Psychology Workforce Task Group, convened by the Ministry of Health. Presented in 2017.

At the Ministry of Health/Health Workforce New Zealand Psychology Workforce Task Group meeting on 23rd May 2017 the question was asked **"How many psychologists do we need in the public health system in New Zealand to provide an effective service?"**

No New Zealand literature newer than 20 years old has been found that addresses this issue at a broad service or population level. Much of the overseas literature regarding this issue makes recommendations for the number of psychologists there should be in a particular type of service. As the organisation, context, and function of services varies widely in New Zealand and overseas, conclusions drawn from translating this literature to the current New Zealand environment is at best tentative. This discussion paper aims to use a range of data sources and approaches to answer the question above in terms of the number of psychologists per hundred thousand of population.

To address the question above, four specific issues were addressed:

1. What is the current size of the psychology workforce in DHB mental health in New Zealand and how consistently is it distributed throughout the DHB?
2. How effective is the current DHB mental health psychology workforce at being able to meet the access and service needs of the New Zealand population?
3. If it is not adequately meeting the access and service needs of the New Zealand population, what size of workforce would be needed to address these needs more adequately, given the financial constraints and other limitations on the health and social services? [1]
4. As growth in psychological therapy delivery in primary care is likely to be an important response to improve the adequacy of access and service delivery, what psychological workforce across primary and secondary care is needed to address the community needs more adequately, given the financial constraints and other limitations on the health and social services.

The need for the workforce to increasingly reflect and be responsive to the diversity of New Zealand peoples, including Māori and Pasifika, is acknowledged a]s an important consideration in developing the effectiveness of the psychology workforce in health.

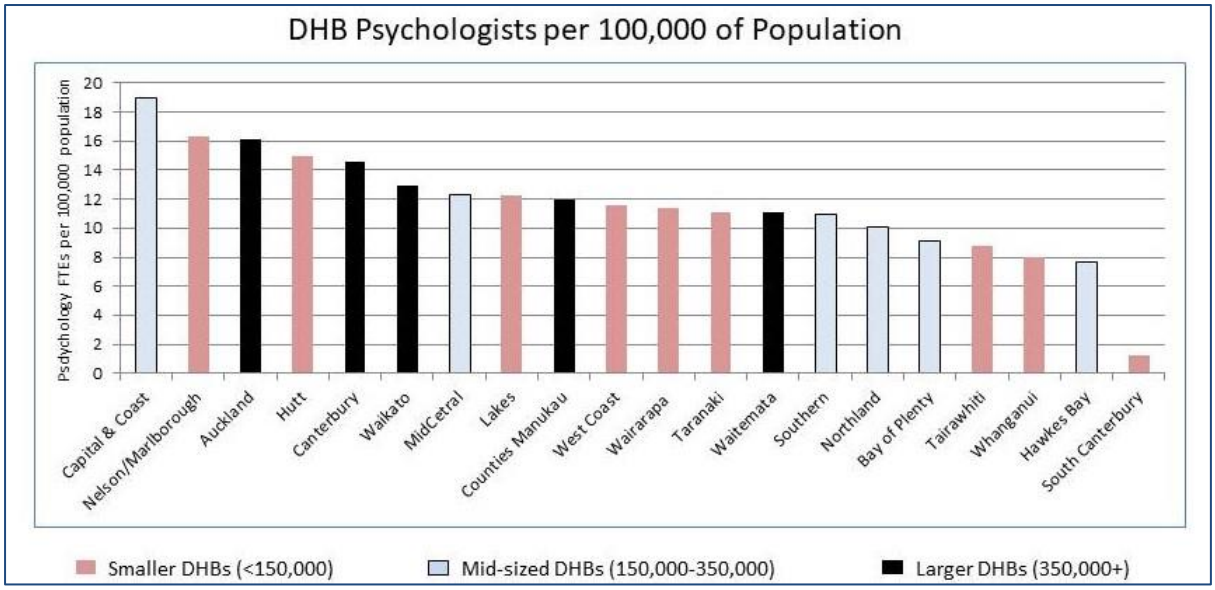
[1] This question was addressed cognisant that means other than increasing psychologist numbers, such as improving efficiency of service delivery and involvement of non-psychologists in delivery of psychological therapies, may be important for improving access to psychological therapies. These will be discussed later.

The Current Psychology Workforce

Psychologists in DHBs

There is an average of 12 psychologists per 100,000 of population in the DHBs

The following graph shows the total psychologist FTE per 100,000 of population for the different DHBs



Source: DHB Psychology Professional Leaders/Advisors. Also reported in APEX Psychologists Newsletter, Sept 2016

It is notable that the FTE of psychologists per 100,000 of population appears to be unrelated to the size of the DHB.

Comparison of this data with Ministry of Health data (http://www.health.govt.nz/new-zealand-health-system/my-dhb) for medical and nursing FTE per 100,000 of population showed substantially less consistency between DHBs in the size of the psychology workforce compared to the medical and nursing workforce.[2] These results are summarised in the following table.

Variability between DHBs of FTE per 100,000 for Psychologists, Medics, and Nurses

FTE per 100,000	Psychologists	DHB Medical Staff	DHB Nursing Staff
Mean	12	158	506
Standard deviation	4	39	97
% variability (sd/m)	33%	25%	19%

Source: DHB Psychology Professional Leaders/Advisors. MOH website (My DHB)

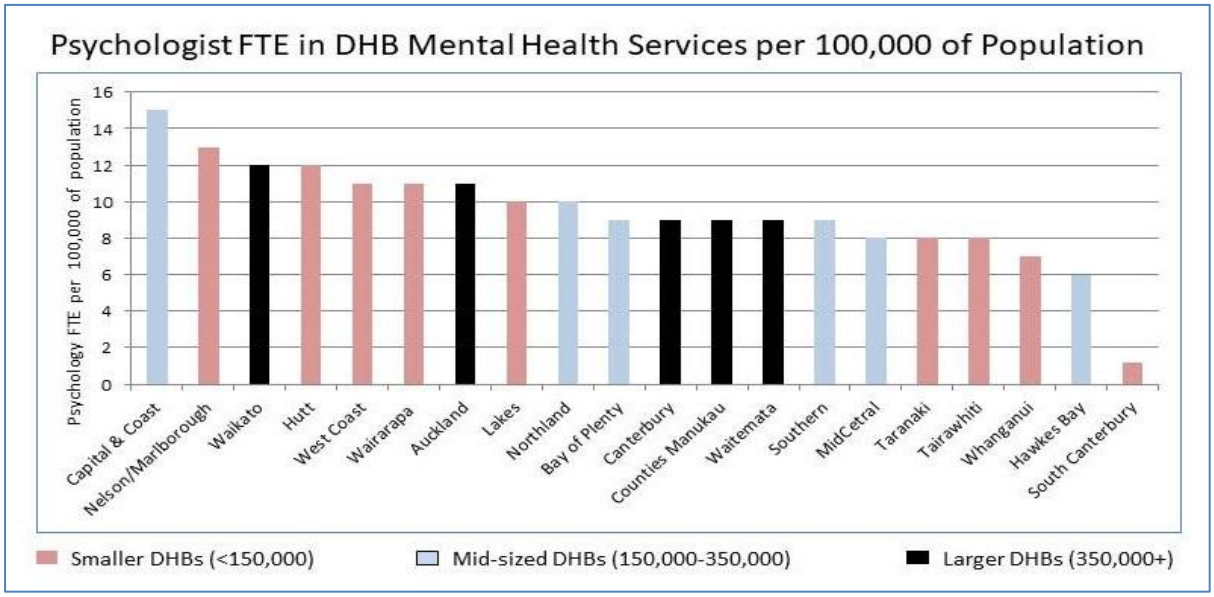
[2] Interestingly, his website reports data for medical staff and nursing staff (including and excluding Healthcare Assistants), and does not report data for any other health professions.

Psychologists in Mental Health Services in DHBs

There is an average of 9 FTEs per 100,000 Psychologists Working in Mental Health in DHBs

Data from the Psychology Professional Leaders (2017) indicates that approximately 81% of DHB psychologists work in mental health services and 19% work in physical health services. The primary focus of the remaining analyses is on psychologists in secondary (DHB) mental health services and primary care.

The following graph shows the psychologist FTE per 100,000 of population in DHB mental health services. The average is 9 psychologist FTEs per 100,000.



Source: Psychology Professional Leaders/Advisors, Aug 2017

The rank ordering of DHBs has changed slightly from the whole-of-DHB graph above, due to the different utilisation of psychologists in physical health services by different DHBs. These figures are somewhat lower that the average FTE for New Zealand mental health services (14) reported in the WHO Atlas (2011; discussed below), which appeared to equate better to the total number of psychologists in DHBs rather than just those in mental health.

Adequacy of Psychological Service Provision in DHB Mental Health Services

Waiting times for psychological input are sufficiently long to cause concern about poor access, risk of increased morbidity, distress, and self-harm.
Psychology leader's ratings indicated low to moderate ability of DHB mental health services' ability to meet the community's needs.
These findings indicate that, amongst other factors, the current workforce size may not be adequate as a basis to provide an effective service.

The information reported above show the current psychology workforce within the DHB Mental Health Services. However, in determining the appropriate psychological workforce for psychologists in DHBs, it is important to understand how well these services are performing. To assess this, the psychology professional leaders/advisors of the DHBs were surveyed.[3] Amongst other data, the survey requested three indicators of psychological service provision:

- Average waiting time for adult mental health services
- Average waiting time for child and adolescent mental health services
- A global rating of how well the mental health services meet the psychological needs of the community for that DHB.

The results of these are reported in this section.

[3] Responses were received for 15 of the DHBs (75%).

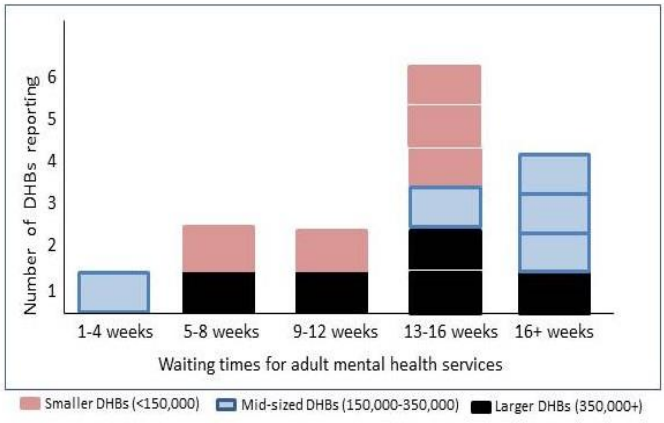
Average Waiting Time in Adult MH Services

The average waiting time for first psychological appointment is 15 weeks in Adult Services

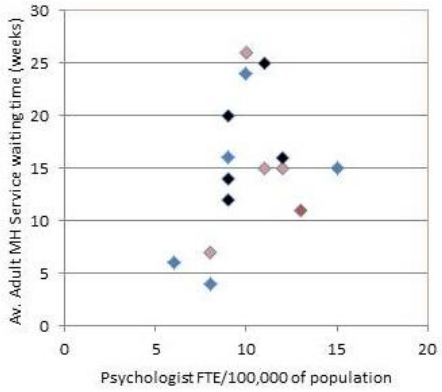
The left-hand graph below shows the average waiting time from referral to a psychologist until the first appointment with the psychologist in DHB Adult mental health services. The second graph shows the relationship between the waiting time and the size of the psychological workforce, measured in terms of psychologist FTE per 100,000 of population.

Average Waiting Time for First Psychology Appointment in Adult MHS

Average Waiting Time by DHB



Av. Waiting Time by Workforce Size



Source: Psychology Professional Leaders/Advisors, Aug 2017

The average waiting time for first psychologist appointments in Adult services across all DHBs was 15 weeks (median=15 weeks). Eighty percent of responding DHBs reported an average waiting time of at least 9 weeks for a first appointment. No significant correlation between waiting time and workforce size was found.

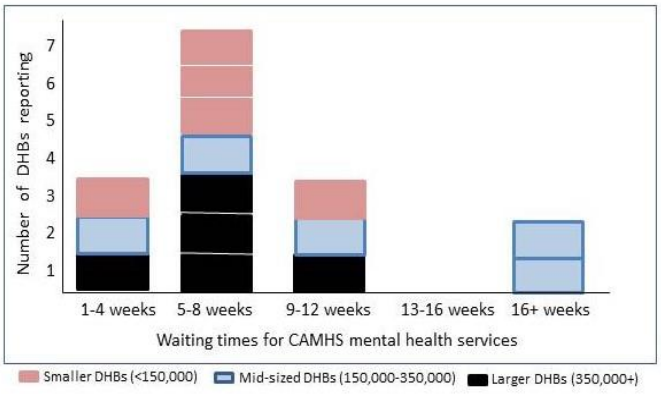
Average Waiting Time for First Psychological Appointment in CAMH Services

The average waiting time for first psychological appointment is 11 weeks in CAMHS services

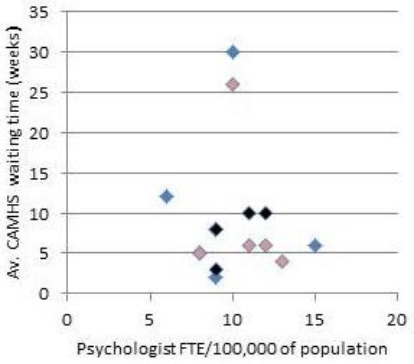
The left-hand graph below shows the average waiting time from referral to a psychologist until the first appointment with the psychologist in DHB CAMHS services. The second graph shows the relationship between the waiting time and the size of the psychological workforce, measured in terms of psychologist FTE per 100,000 of population.

Average Waiting Time for Child and Adolescent Mental Health Services

Average Waiting Time by DHB



Av. Waiting Time by Workforce Size



Source: Psychology Professional Leaders/Advisors, Aug 2017

The average waiting time for first psychologist appointments in CAMHS services across all DHBs was 11 weeks. Eighty percent of responding DHBs reported an average waiting time of at least 5 weeks for a first appointment. No significant correlation between waiting time and workforce size was found.

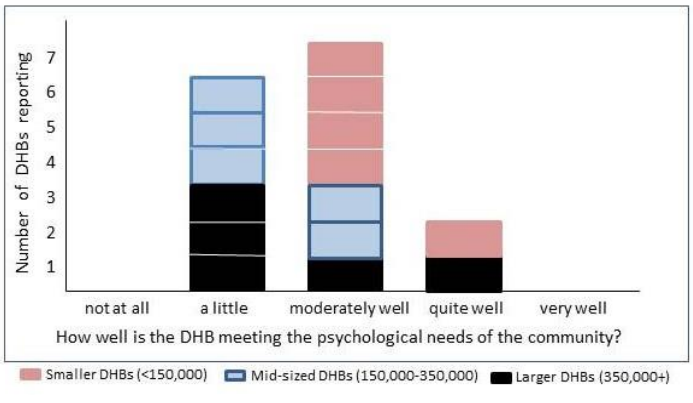
Global Ratings of Ability of the Psychological Services to Meet the Needs of the Community

Psychology Leader's global assessment of the DHB psychology services to adequately meet the needs of the community were generally low-moderate.

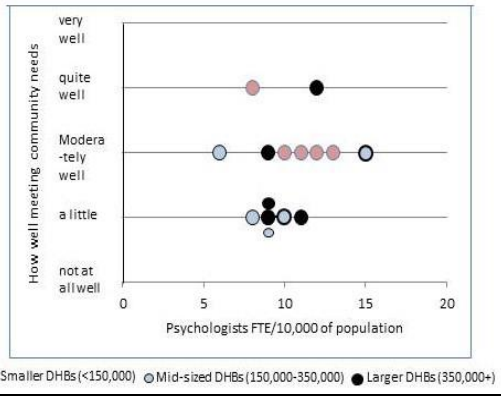
The DHB Psychology Professional Leaders were asked to rate "Overall, how well does your mental health service meet the psychological needs of your community. The results are shown in the following graph.

Ability of DHB Psychological Services to Meet Community Need

Ability to Meet Community Need by DHB



Ability to Meet Need by Workforce Size



Source: Psychology Professional Leaders/Advisors, Aug 2017

These results indicate that psychological services were mostly rated as only low-moderately meeting the needs of the community they served. Small DHBs appeared to report a slightly higher level of satisfaction with the quality of the service than mid-sized and larger DHBs. There was no statistically significant relationship between the number of mental health psychologist FTEs per 100,000 of population and ability to meet the needs of the community adequately.

Implications: Adequacy of Psychological Services to Meet Community Need

The waiting times described above are substantially longer than is desirable for a responsive and recovery-focused service and creates risk of further deterioration and adverse outcomes for mental health clients and the system as a whole.

If the psychologist FTE per 100,000 of population approached an adequate level, shorter waiting lists and more positive evaluations of the ability of the service to meet community needs would be expected with the higher actual FTE levels. This was not the case, suggesting that the size of the workforce may need to increase (along with other possible improvements to effectiveness) to be able to provide a service that effectively meets the community's needs for psychological intervention.

These findings provide strong evidence that the current psychological workforce is not adequate for the needs of the community, in part evidenced by the long waiting times and in part by the relatively low self-ratings of its ability to meet the needs. This indicates that to answer the question "how many psychologists do we need for an effective psychological service in the NZ public health system?", we will need to determine the psychologist FTE per 100,000 of population needed for an effective response rather than relying on current numbers.

Recommended DHB Mental Health Psychological Workforce for Adequate Psychological Services

Given the findings reported above, two approaches have been used to determine the DHB mental health psychologist FTE needed to adequately meet the community need.

1. Estimates by the DHB Psychology Professional Leaders of size of workforce which would be required to provide an adequate workforce.
2. International comparisons of the Public Mental Health Psychology FTE per 100,000 of population, utilising data from the World Health Organisation Mental Health Atlas (2011).

These approaches, and conclusions drawn from them, are described below.

Recommended DHB Psychology Workforce to Meet Community Need

For this approach, the DHB Psychology Professional Leaders were asked to estimate the additional percentage of psychological workforce that would be required to "create an adequate psychological response within the DHB". An adequate response was described as "enough psychology time for most mental health services to achieve reasonably short waiting times for appropriate clients, and the ability to provide effective help for these clients."

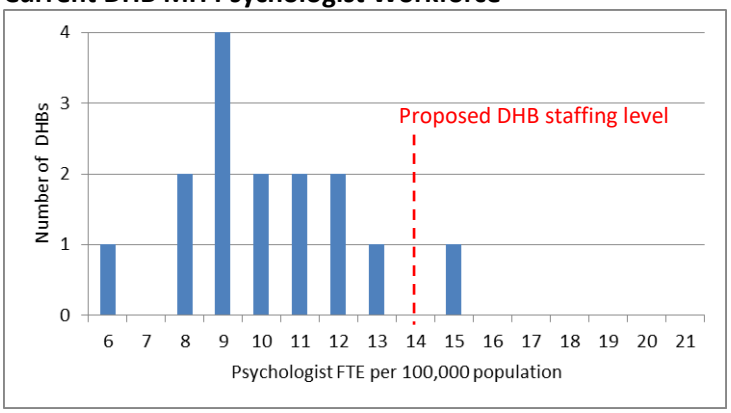
Participants were asked in making this estimate to be "realistic and pragmatic' and "mindful of the competing demands in the health system". Their estimates were then used to calculate the FTE per 100,000 of population for an effective service.

The following graphs show these analyses.

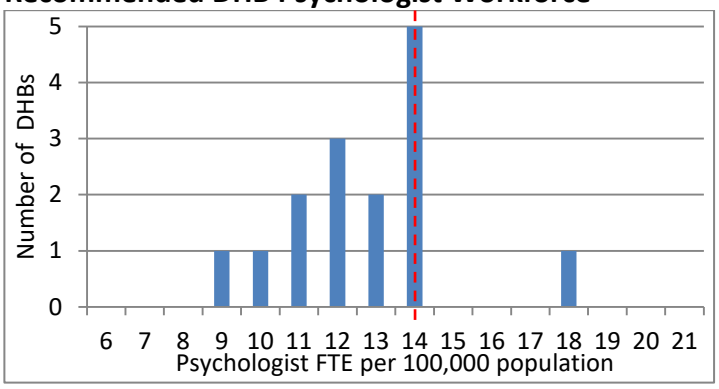
Participants' responses indicated that a workforce averaging 13-14 FTE of psychologist per 100,000 of population working in mental health would be sufficient to create an adequately functioning psychological service. The current and recommended workforce FTEs per 100,000 of population are shown in the following graphs.

Only one DHB currently has a higher psychology workforce rate than the proposed level of 14 FTE/100,000.

Current DHB MH Psychologist Workforce



Recommended DHB Psychologist Workforce



Source: Psychology Professional Leaders/Advisors, Aug 2017

Recommended Psychology Workforce for Adequate Psychological Services in the DHB and Primary Care

The provision of more services, including mental health services, in primary care is an important initiative. There has been growth in the employment of psychologists in primary care. For the purposes of this document, psychologists in primary care include psychologists who are employed within the primary healthcare organisations (PHOs) and similar publically funded organisations. It does not include psychologists working in private practice.

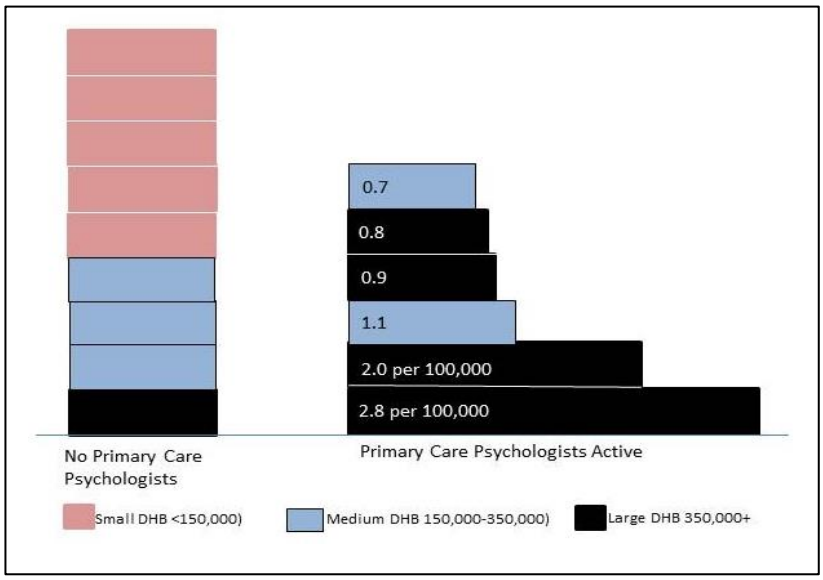
A separate survey is being undertaken of psychology leaders within the primary care sector, but data from this is not yet available. In addition to reflecting on their own services, DHB psychology leaders were asked to reflect on primary care psychology in their DHB and to recommend levels that they believed could lead to adequate provision of psychological services across the DHB and primary care. In making their recommendations, the DHB professional leaders were asked to be realistic and pragmatic and to be mindful of the competing demands on the health system, as described above.

Current Primary Care Psychology Activities in DHBs

Primary Care Psychologists are not present in most DHBs and remain relatively rare in DHBs where they are present.

Nine of the DHBs that participated in the survey reported that there were currently no psychologists working in primary healthcare in their DHB. The following graphic summarises these results.

Current Psychologist Presence in Primary Care by DHB
and primary care psychologists per 100,000 of population



These results indicate that there are few psychologists employed in primary care at present, with the majority of DHB areas having no psychologists employed in primary care, and numbers of psychologists per 100,000 of population are low even in DHBs where they are present.

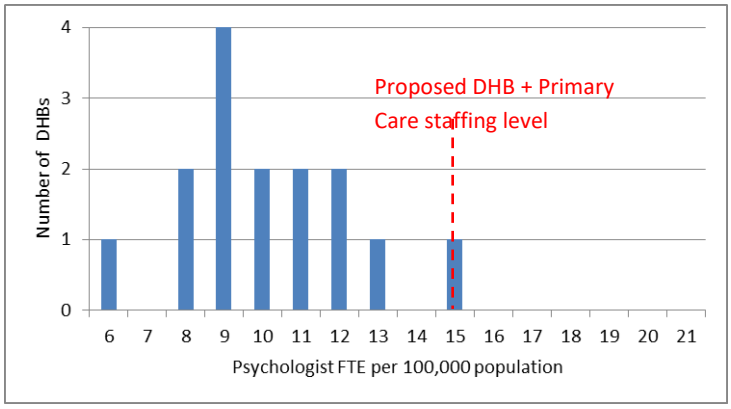
Recommended DHB and Primary Care Psychology Workforce to Meet Community Need

The DHB Psychology Professional Leaders were asked to recommend the additional percentage of psychological workforce in the PHOs that would be required to "create an adequate psychological response" to mental health difficulties within the health system as a whole.

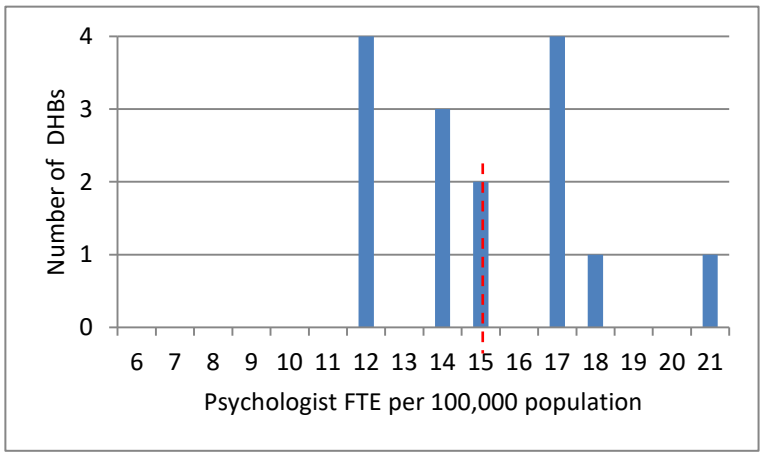
Participants' responses indicated that a workforce averaging 15 FTE of psychologist per 100,000 of population working in DHB mental health and primary care would be sufficient to create an adequately functioning psychological service. The current and recommended workforce is shown in the following graphs.

One DHB currently matches the proposed workforce rate of 15 FTE/100,000.

Current DHB MH Psychologist Workforce



Recommended DHB Psychologist Workforce

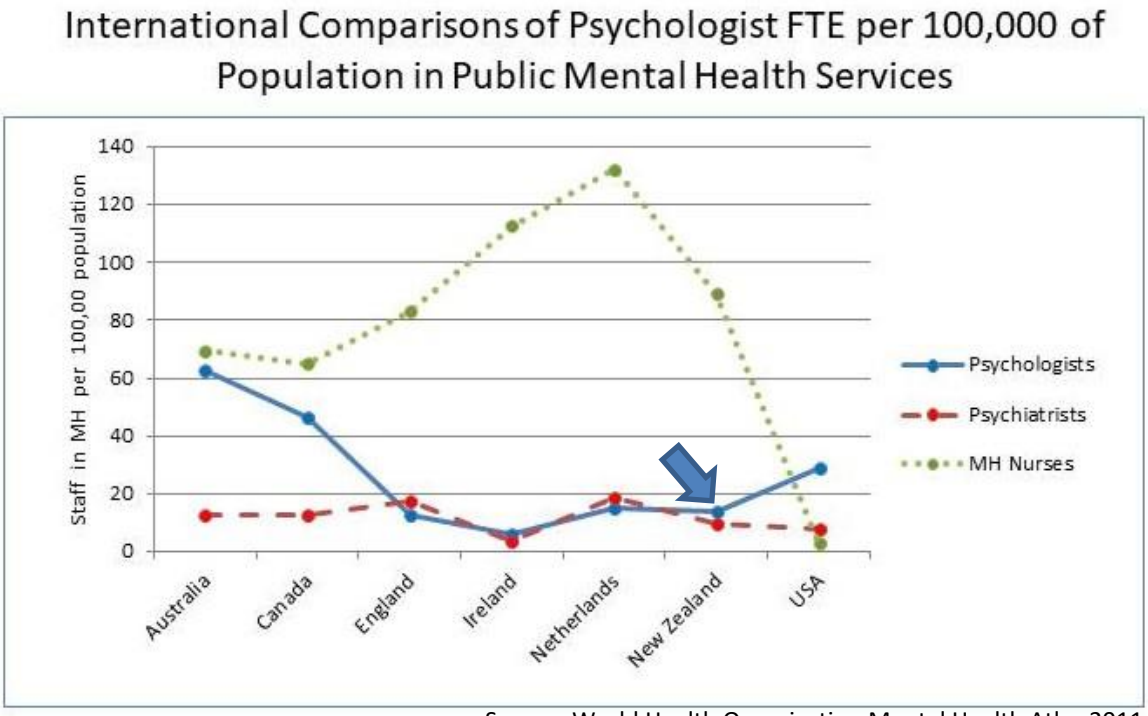


Source: Psychology Professional Leaders/Advisors, Aug 2017

International Comparisons of Psychologists in Public Mental Health Services

WHO data shows large variations between FTE per 100,000 of population for medics nurses, and psychologists in different countries that are broadly comparable to New Zealand.
The average of these countries excluding New Zealand is 26 psychology FTEs per 100,000 of population – approximately twice the New Zealand rate.
The reported New Zealand rate appears higher than other NZ data, and may reflect the psychology workforce across all of health, not just mental health.

Another basis for determining appropriate levels of psychological staffing is to compare FTEs per 100,000 of population for New Zealand with other countries. The graph below shows 2011 World Health Organisation data regarding FTE per 100,000 of population for psychologists, psychiatrists, and mental health nurses working in public mental health services in a range of other countries that may be considered more or less comparable to New Zealand.[4]



Source: World Health Organisation Mental Health Atlas 2011

This data showed wide variability in the rates of health professionals per 100,000 of population for all three disciplines. The average for psychology across all the countries was 26 psychology FTEs per 100,000 of population, more than twice the current NZ psychology workforce rate. The New Zealand data in the WHO Mental Health Atlas indicated 14 psychologists per 100,000 of population. This is higher than the numbers found in from other data sources and may include psychologists working in physical health services.

[4] Data for Scotland was not available.

Conclusion: How Many Psychologists for Health?

Based on our best estimates of optimal numbers of psychologists in health that has been derived from the multiple sources of information described above, the following estimates for numbers of psychologists needed in the primary and secondary health services are presented.

For DHBs

- Our best estimate is that each DHB needs a minimum of 15 psychologists per 100,000 of population to adequately meet the need.
- The current average for DHBs is around 10 psychologists per 100,000 of population.
- To meet the identified need…

268 additional psychologists (an average of 13 per DHB) would be needed to achieve the minimum of 15 psychologists per 100,000 of population working in DHBs
Approximately **1.5%** of the population would be able to be seen in any year for medium length therapy (around 12 sessions) at a rate of 15 psychologists per 100,000 of population

For the Primary Health Sector

- Our best estimate is that in primary care settings a minimum of 15 psychologists per 100,000 of population is also required to adequately meet the need.
- The current average for primary care settings is around 1 psychologist per 100,000 of population

672 additional psychologists would be needed to achieve the minimum of 15 psychologists per 100,000 of population working in DHBs
Approximately **3.3%** of the population would be able to be seen in any year for a typical length of therapy as currently available through some PHOs (around 4-5 sessions) at a rate of 15 psychologists per 100,000 of population

Other countries offering widely available psychological therapy to the general population typically find that the number of the population taking up this opportunity stabilises at around 5%. This is consistent with what is suggested above, if the access through DHBs and PHOs is summed.

Currently, DHB services mostly employ clinical psychologists, child and family psychologists, and health psychologists. Primary healthcare employs a mixture of clinical, counselling, health, PG Dip Psychological Practice psychologists.

Psychologist Training in New Zealand

Currently, approximately 130 trainees start each year in postgraduate professional psychology training programmes that may lead to roles working in the health, disability, or social services programmes, so there is a large discrepancy between the numbers being trained and the numbers required to meet the need.

Other social services agencies, including Oranga Tamariki and Corrections are also signalling their intention to increase the number of psychologists they employ, which will place further pressure on growing the workforce working across the whole of government social services sector.

Trainees starting each year include approximately 70 clinical psychologists, 7 counselling psychologists, 8 health psychologists, 9 child and family psychologists, 8 community psychologists, 10 Applied Behaviour Analysis psychologists, and 20 psychologists through the Massey University Postgraduate Diploma of Psychological Practice. There are also approximately 20 Educational psychologists employed a year.

Increasing the number of trainees will be necessary to allow us to work towards being able to meet the need for psychology services in health and in other social services. Other strategies such as recruiting from overseas and improving retention of psychologists are also important. Additional strategies outlined in the Workforce Task Group's "Pipeline" document will also be important.

Provision of psychological therapies by people other than psychologists is also important, and many psychologists are keen to support this to ensure that people in New Zealand have access to safe and effective psychological therapies. However, the figures described above do relate to the provision of services by psychologists, not to the provision of psychological therapies by non-psychologists.