



HASANZ

HEALTH & SAFETY ASSOCIATION NZ

Building the Professions

HASANZ Health and Safety Workforce Pipeline Report

A review of capacity, capability and demand within New Zealand's health and safety workforce

NOVEMBER 2019

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Foreword and acknowledgements

Tēnā koutou

A competent and qualified health and safety professional workforce is essential to improving New Zealand's health and safety performance and outcomes. For risks to be well managed, organisations need to be able to access specialist skills and advice when they need them. Without good advice, organisations are flying blind.

This report builds on previous work including *The Report of the Independent Taskforce on Workplace Health and Safety – He Korowai Whakaruruhau* (2013), following on from the Pike River coal mine tragedy, which identified major shortfalls and gaps in the health and safety professionals workforce in New Zealand. Similarly, the Government's *Health and Safety at Work Strategy 2018-2028* identified lifting the capability of health and safety professionals as a key priority area.

This report provides information on the existing capability and capacity of the health and safety professionals workforce, identifies key gaps, and forecasts demand over the next decade. It outlines recommendations for change and identifies who can work together to implement these recommendations. The next step is action. The Health and Safety Association of New Zealand (HASANZ) will co-design and coordinate a cross-sector, multi-year programme of work to address the issues identified in the report and build the workforce of the future.

This report has been a collaborative exercise involving many organisations and people. I would like to thank WorkSafe NZ and the Skills Organisation for providing funding to allow this report to be developed. We couldn't have done it without you! A core team of people including Helen Parkes, Simon Bidwell, Frances Martin, Kathryn Maloney, Nick Hunn, Lisa Bridge, Sarah Willette and Jennah Kannard developed the report. A large number of people were involved from the health and safety associations including Marion Edwin, Derek Miller, Natasha McKinnon, John Hickey, Nikki Edge, Pam Mitchell, Rachel Lilley, Teresa Houlton, Dave Moore, Selena Armstrong and Greg Dearsly. Other input was provided by Angele Toomey and Francois Barton.

Together we can make a difference and ensure all New Zealanders get home safe and well.

Ngā mihi



Philip Aldridge

HASANZ Executive Director

Executive summary

Purpose of this report

This report provides an overview of issues for seven health and safety disciplines that together account for a substantial proportion of New Zealand's health and safety workforce. It identifies gaps and makes recommendations to build capacity and grow capability of the workforce. It draws on insights from people within the disciplines, government agencies and businesses, as well as from desktop research, surveys and economic analysis.

Why this work is important

Businesses, government agencies and workers need access to high-quality health and safety advice and services so they can contribute to creating safe, healthy and productive workplaces in New Zealand. The importance of ensuring access to quality health and safety advice and services was highlighted in both the 2013 *Report of the Independent Taskforce on Workplace Health and Safety* and the Government's *Health and Safety at Work Strategy 2018-2028*, launched in December 2018. All health and safety disciplines in New Zealand work to the Health and Safety at Work Act 2015, which sets out the health and safety responsibilities of all businesses and workers.

Workforce planning is complex. It needs to occur at a 'systems' level, as well as at an individual discipline level. It requires the involvement of multiple parties, including professional groups, regulators, educators, businesses, workers and their representatives. It is not something individual disciplines can achieve on their own. It also requires information about the current state of the workforce and expected future demand.

How this work helps

This report gives an overview of the capacity and capability of the health and safety workforce, including current gaps and future challenges. It provides recommendations to address these gaps and suggestions on who could help implement these recommendations. It also identifies priority areas for action.

Focus areas

This report focuses on the seven disciplines whose professional associations are members of HASANZ. These are:

- » **Health and safety generalists** – provide general health and safety advice, planning and risk management across a worksite or organisation.
- » **Hazardous substances professionals** – specialists in the management of safety risks from explosive, flammable, toxic or corrosive substances being manufactured, used, stored or transported at work.
- » **Occupational hygienists** – specialists in identifying, evaluating and controlling risks to worker health from physical, chemical and biological hazards.
- » **Occupational health nurses** – provide advice and services to help manage the relationship between work and health, including the effects of both work on health and health on work.
- » **Human factors/ergonomics (HFE) professionals** – provide systems-level analysis and advice about the design of work equipment, environments, and processes to support healthy and productive work.
- » **Occupational therapists** – support personal health and wellbeing through meaningful activity: in the work context, this means helping people affected by physical or mental health issues to return to or stay at work.
- » **Occupational health physiotherapists** – work to prevent or treat injuries suffered at work and help affected people return to or stay at work.

The report highlights gaps and makes recommendations in the following key areas:

- » **Scope:** improving understanding of the scope and role of the various disciplines and the value they offer.
- » **Competency frameworks:** developing and adopting fit-for-purpose competency frameworks.
- » **Education and training:** improving the accessibility and quality of education and training pathways.
- » **Supply and demand:** building the workforce's ability to meet current and future demand.
- » **Professional development:** improving access to appropriate continuing professional development.
- » **Enabling recommendations:** getting the best out of professional associations and networks.

Who will help deliver these recommendations?

This report uses a RASCI model to suggest who could help deliver the recommendations. A RASCI model identifies who should be:

- » Responsible for delivering the work.
- » Accountable for the work.
- » Supporting delivery of the work.
- » Consulted about the work.
- » Informed about the work.

Who was involved in the preparation of this report?

This report was prepared by HASANZ with funding and support from WorkSafe and the Skills Organisation. It was drafted with considerable input from members of the seven disciplines. It is also informed by research on future demand for health and safety services commissioned from MartinJenkins & Associates.

Next steps

HASANZ will lead a consultative process on the report's findings and recommendations involving the disciplines, businesses, government, and workers and their representatives. Action plans could then be developed to implement the recommendations. This would include short-term plans to address priority issues and longer-term plans to address structural issues.

A lack of information about some issues means there are still gaps in our understanding. Further research is needed in several areas including latent demand, the Māori workforce, immigration and the relatively high migrant workforce within New Zealand's health and safety sector. The growing focus on work-related health risks will open up discussions on other disciplines that are not discussed here, such as occupational health physicians and organisational psychologists. Also, looking ahead, the changing work patterns and changing technology will see a shift in workplace health and safety as the gig economy and robotics replace more traditional forms of work.

Key findings and recommendations

RECOMMENDATION 1

Improve understanding of the disciplines

Issues and opportunities

There is a need to improve understanding of the scope and roles of the various health and safety (H&S) disciplines. Many businesses and public sector agencies do not fully understand what the various disciplines do and the value they offer. Therefore, they may not know where to seek the most appropriate advice or appreciate the need to involve more than one discipline. This lack of understanding may, in part, be due to a lack of complete clarity across the workforce around roles and interactions between disciplines.

Further collaborative work between the disciplines and appropriate guidance and information for businesses are needed to improve understanding and optimum use of the professional health and safety workforce.

Recommendations

- 1.1** Further develop existing processes for health and safety disciplines to agree their scopes, roles and relationships, including protocols for consultation or referral.
- 1.2** Ensure that professional ethics and understanding of related disciplines are incorporated into health and safety education programmes.
- 1.3** Develop guidance and information for businesses, clarifying the roles and value of the various health and safety disciplines, including what 'competency' looks like.

Who could help deliver this?

- » **Responsible:** H&S professional associations
- » **Accountable:** HASANZ
- » **Support:** H&S professionals, education providers
- » **Consult:** WorkSafe, unions, H&S-related industry associations
- » **Inform:** business associations, businesses, ACC

RECOMMENDATION 2

Develop and adopt appropriate competency frameworks

Issues and opportunities

A competency framework¹ outlines the knowledge and skills a person requires to become a professional within their field. However, not all the seven disciplines covered by this report have an agreed competency framework. As a result, there is a lack of clarity about what 'competent' means for new entrants and existing professionals in some disciplines.

Disciplines regulated as a health profession under the Health Practitioners Competence Assurance Act 2003 (nursing, occupational therapy and physiotherapy) have clear competency frameworks for the discipline but not necessarily for the specialist area of work health and safety. For non-regulated disciplines, competency frameworks can also be used to inform education and guide certification processes. However, competency frameworks for these disciplines are at varying stages of maturity and implementation.

Recommendations

- 2.1** For any discipline or speciality area that does not have one, develop a competency framework that clearly sets out the knowledge, skills and professional qualities needed to be competent in the discipline.
- 2.2** Where fit-for-purpose competency frameworks exist, promote their recognition and adoption by those working in the profession, educational institutions and other key stakeholders.

Who could help deliver this?

- » **Responsible:** H&S professional associations
- » **Accountable:** HASANZ
- » **Support:** WorkSafe, licensing or accreditation bodies
- » **Consult:** education providers
- » **Inform:** businesses, unions

¹ Also referred to as a capability framework or a knowledge and skills framework.

RECOMMENDATION 3**Improve accessibility and quality of education and training pathways****Issues and opportunities**

There are gaps in education and training pathways for some disciplines. This is a key barrier to building workforce capacity and capability.

For some disciplines, there is no single programme of study people can undertake at a New Zealand tertiary institution that covers all required learning areas. A barrier is that, for some disciplines, low student numbers mean it is uneconomic for tertiary institutions to develop and run programmes under current funding arrangements. In other disciplines, not all qualifications and courses are aligned to current competency frameworks. As a result, it can be hard for new entrants to understand the difference between the various courses and pathways.

There is also a need for more flexible, non-traditional learning pathways, including vocational qualifications. This would diversify the reach of health and safety and would enable those who cannot go to university to build relevant competencies. In some disciplines, there are a number of people who have significant experience but do not have appropriate qualifications. A Recognition of Prior Learning (RPL)² assessment framework would be a way to validate their skills and experience.

Recommendations

- 3.1** Develop consistent mechanisms for accrediting qualifications or programmes of education to ensure they align with competency frameworks.
- 3.2** Work with education providers to develop new courses in New Zealand in disciplines where there are current or potential future shortages.
- 3.3** For specialist disciplines that cannot be supported by New Zealand-based courses, develop and support alternative ways of accessing appropriate education.
- 3.4.** Develop vocationally-based methods to build and recognise competence which are equivalent in quality and stature to tertiary study.
- 3.5.** Investigate whether an RPL assessment framework can be used to help people with appropriate skills and experience to gain qualifications in relevant disciplines.

Who could help deliver this?

- » **Responsible:** H&S professional associations
- » **Accountable:** HASANZ
- » **Support:** education providers
- » **Consult:** H&S professionals
- » **Inform:** WorkSafe, businesses

**DID YOU KNOW**

At least another 2,100 health and safety professionals will be required over the next 10 years. This number is likely to be higher given latent demand for advice and services.

² Recognition of Prior Learning is a process that involves formal assessment of a learner's relevant and current knowledge and skills (gained through prior learning) to determine achievement of learning outcomes of a qualification for the purpose of awarding credit towards that qualification.

RECOMMENDATION 4**Meet current and future demand****Issues and opportunities**

Currently, there is no overall strategy in place to ensure that the supply of qualified people across the various health and safety disciplines is sufficient to meet demand for their advice and services, now and in the future.

As part of this project, MartinJenkins & Associates was commissioned to estimate the current size of the health and safety workforce, and the size of the workforce required to meet demand by 2029. MartinJenkins estimated that the current 'suspected workforce' of approximately 4,500 in 2019 would need to increase by 3.8% a year to 6,600 to meet expected demand in 2029. That is about an additional 2,100 roles or an increase of roughly 45% over 10 years.

This forecast includes some allowance for increased demand for health and safety services over and above expected growth in the general workforce. However, work undertaken for this report identified a number of pressing challenges in the short term, including unmet current demand, unbalanced skill mix and looming demographic pressures.

Health and safety generalists

Our research indicates there are skill mix issues in the generalist workforce. Only about half of all health and safety generalists are part of a professional association. A comparison with the United Kingdom suggests that senior qualified professionals form a significantly lower percentage of New Zealand's generalist workforce than would be expected in a mature health and safety system. This corresponds with reports from business leaders and recruiters that businesses are struggling to fill roles for senior, experienced health and safety professionals.

Occupational hygienists

Qualified occupational hygienists are fully occupied and struggling to meet demand for their services. Analysis by WorkSafe in 2018 found New Zealand has fewer qualified occupational hygienists per capita than comparable countries and about half as many as Australia. A project is underway to develop the occupational hygienist workforce, but this needs to be sustained.

Hazardous substances professionals

The number of compliance certifiers in New Zealand has reduced over the past five years to the current number of 75, and remaining certifiers report very high workloads. Two thirds of certifiers are aged over 55, meaning this workforce is already facing demographic pressures which will increase in the short term.

Occupational health nurses

Occupational health nurses are the oldest group of nurses in clinical practice. Two thirds are aged over 50, and many of these having worked in the sector for more than 15 years. This workforce faces attrition in both numbers and experience if action is not taken to improve the pathway into the occupational health speciality.

HFE professionals

The number of HFE professionals in New Zealand is similar to comparable countries on a population basis, but the total number is small and there is likely to be significant latent demand for their services as awareness grows of the value they can offer.

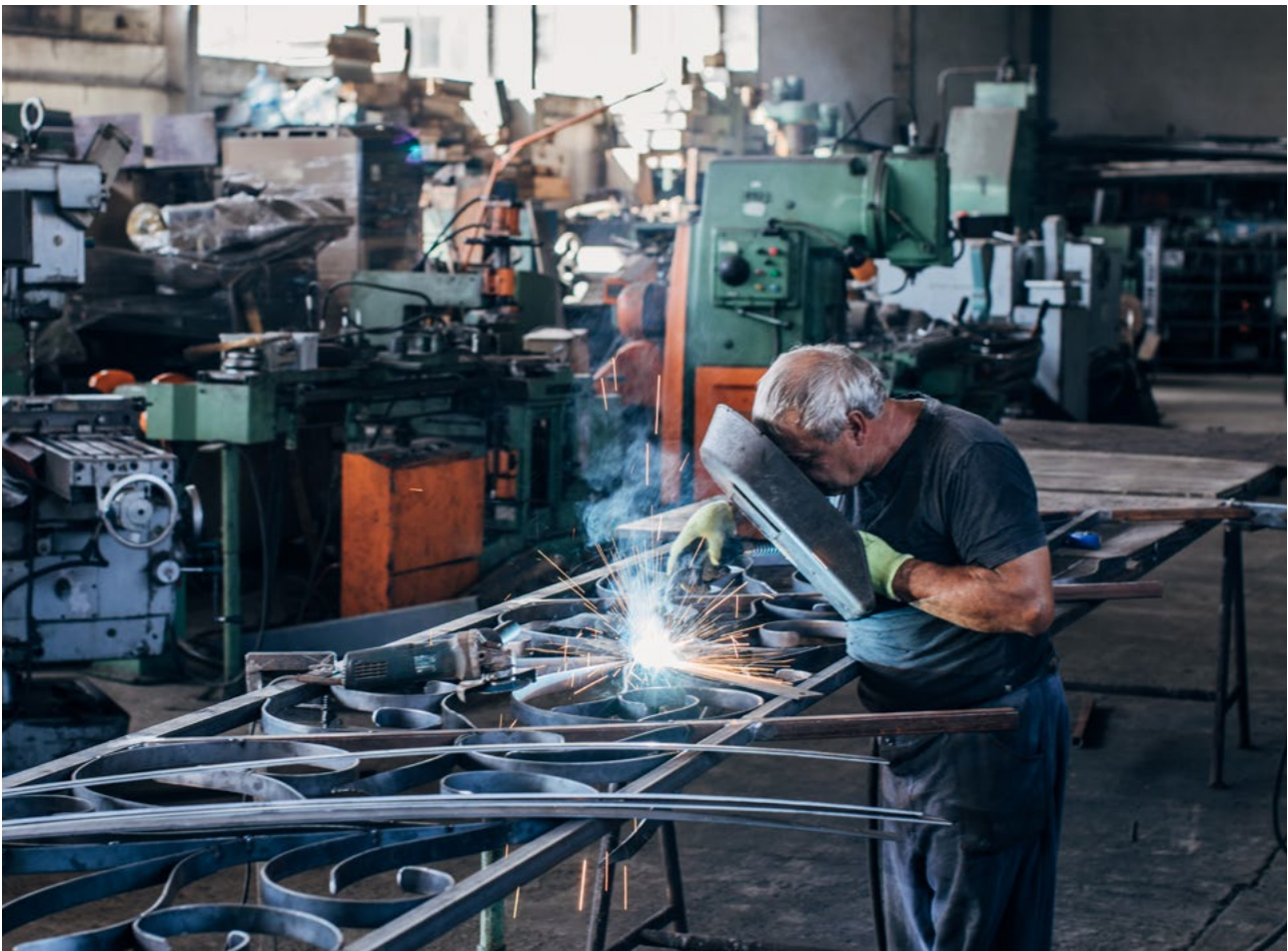
Further work is needed to better understand supply and demand issues in the health and safety workforce, to be able to undertake short- and long-term planning and identify priority areas for intervention. This work is already underway for the occupational hygiene and hazardous substances disciplines.

Recommendations

- 4.1 Undertake more detailed analysis to understand supply and demand issues for priority workforce areas (in particular health and safety generalists, hazardous substances professionals and occupational health nurses).
- 4.2 Based on this analysis, develop action plans for the priority areas, linking with the recommendations on education, training and continuing professional development.
- 4.3 Develop a strategy for attracting people into the disciplines that includes raising awareness of health and safety as a career, information about career options and pathways, and internships.

Who could help deliver this?

- » **Responsible:** HASANZ
- » **Accountable:** H&S professional associations
- » **Support:** WorkSafe, ACC, professional recruitment/marketing services
- » **Consult:** career development professionals, tertiary education providers, Stats NZ
- » **Inform:** businesses



RECOMMENDATION 5**Improve access to continuing professional development****Issues and opportunities**

Continuing professional development (CPD) is important to maintain currency of practice and awareness of new disciplinary knowledge and to support the development of technical and leadership skills. Currently, access to CPD differs across the disciplines. Those working in regulated health professions generally have clearer expectations and more structured availability of CPD than those working in non-regulated disciplines. Lack of ongoing education and training related to hazardous substances was a particular issue raised in this project.

Recommendations

- 5.1** Work to ensure that all those working in health and safety professions have access to appropriate CPD.
- 5.2** Support the development of career pathways within health and safety disciplines, including for both technical specialisation and people leadership roles.

Who could help deliver this?

- » **Responsible:** H&S professional associations
- » **Accountable:** HASANZ
- » **Support:** WorkSafe, ACC
- » **Consult:** education providers, Institute of Directors, Business Leaders' Health & Safety Forum
- » **Inform:** H&S professionals

RECOMMENDATION 6**Get the best out of professional health and safety associations and networks****Issues and opportunities**

The voluntary nature of most health and safety professional associations means they have limited resources in terms of people and funding. Disciplines with smaller memberships have fewer people to shoulder the burden of running a voluntary association. As a result, not all the associations have the capacity to undertake the significant work required to develop and support their profession.

In addition to the professional associations, there are a significant number of formal and informal groups operating in the health and safety system. These groups have a different role to the associations and play an important part in connecting the health and safety workforce to businesses in their local areas/industries. They also connect members of the workforce to each other. There is an opportunity for those running harm prevention programmes to make better use of these networks to disseminate information to businesses. However, currently, there is no map of the 'influence network' that would help to identify the relative influence of each group, their sphere of influence and the connections between them.

Recommendations

- 6.1** Evaluate options to ensure health and safety professional associations have the capability and capacity needed to undertake the critical activities required to improve the capability and capacity of their members.
- 6.2** Develop an influence 'map' for health and safety that identifies the key influencers across the various parts of the system connecting each so that they can work together. Make the map publicly available and ensure it is regularly updated to maintain currency.

Who could help deliver this?

- » **Responsible:** HASANZ
- » **Accountable:** HASANZ Governance Group
- » **Support:** H&S professional associations, WorkSafe, ACC
- » **Consult:** associations, organisations, influencers in the system
- » **Inform:** H&S professional associations, H&S professionals, H&S groups

Priority areas for action

Table 1 below summarises key findings in this report and highlights priority areas for action.

It gives a sense of the situation of each discipline in relation to three key areas that are a focus for this report:

- » the existence and adoption of competency frameworks;
- » availability and adequacy of education, training and professional development pathways;
- » ability to meet current and forecast demand.

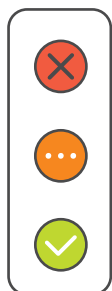
The table suggests that hazardous substances professionals should be a priority discipline for action.

It also highlights issues across the board with health and safety generalists, and areas of focus for occupational hygienists, occupational health nurses and HFE professionals.

Table 1: State of the disciplines at a glance

	Competency framework	Education and training	Supply and demand
Health and safety generalists			
Hazardous substances professionals			
Occupational hygienists			
Occupational health nurses			
HFE professionals			
Occupational therapists			
Occupational health physiotherapists			

KEY



Competency framework

No broad framework covering the discipline.

Framework(s) exist but may be incomplete or not fully accepted or implemented.

Robust framework defined and in use. May be room for improvements.

Education and training

Any education and training in New Zealand fragmented and difficult to access.

Education and training available in New Zealand but gaps in completeness, accessibility or quality.

Education and training pathways exist in New Zealand. Quality or access improvements possible.

Supply and demand

Significant short-term gaps without processes in place to address them.

Challenges related to existing demand, demographic pressures or skill-mix issues.

No major immediate pressures. May be longer-term challenges.

Introduction

The 2013 *Report of the Independent Taskforce on Workplace Health and Safety* stated that developing a professional health and safety workforce was vital to improving New Zealand's work health and safety outcomes. This was reiterated in the Government's *Health and Safety at Work Strategy 2018-2028*.



DID YOU KNOW

WorkSafe has estimated work-related health deaths to be around 750-900 a year, with an estimated 5,000-6,000 hospitalisations each year due to work-related ill health.

One of the Independent Taskforce's recommendations was to establish an alliance for the health and safety workforce. The creation of the Health and Safety Association of New Zealand (HASANZ) in 2014 fulfilled this recommendation. It set a platform for collaborative action by members of the health and safety workforce to raise professional standards across the sector.

A process has been established for the associations that represent health and safety disciplines to become full or associate members of HASANZ. The HASANZ Register has been implemented as a national, online register of verified workplace health and safety professionals. HASANZ has established a scholarship programme to improve access to health and safety tertiary education, and it is leading projects to build capacity and capability in the occupational hygienist workforce. In addition, HASANZ is in the process of establishing a project to grow the number of hazardous substances professionals.

Another of the Independent Taskforce's recommendations was to build an integrated picture of the capacity and capabilities of the professional health and safety workforce and to identify the improvements needed. Some initial work to address information gaps in priority areas has been undertaken in recent years by WorkSafe, HASANZ and its member associations.

This report brings together and builds on this work to give an overall picture of the challenges facing the health and safety workforce in New Zealand. It includes recommendations for addressing these challenges and identifies some key priorities for short-term action, along with areas that need further investigation.

The report focuses on the seven disciplines whose professional associations have achieved full membership of HASANZ. These are:

- » health and safety generalists;
- » hazardous substances professionals;
- » occupational hygienists;
- » occupational health nurses;
- » HFE professionals;
- » occupational therapists;
- » occupational health physiotherapists.

Context for health and safety workforce development

Several contextual factors influence the environment for New Zealand health and safety professionals and need to be considered as part of workforce planning.

First, New Zealand's small size and isolation mean that specialised workforce groups can struggle to obtain critical mass. This makes it necessary to explore alternative, innovative and collaborative approaches to education, training and professional development.

Second, New Zealand's no-fault accident compensation system is highly valued, but this also means that employers do not necessarily see the full costs of work-related injury and illness. They therefore have fewer incentives to invest in preventive approaches than in some jurisdictions. Other levers may be needed to support the contribution health and safety disciplines can make to harm prevention.

Third, there is an increased focus on work-related health. WorkSafe has estimated that there are around 750-900 deaths and 5,000-6,000 hospitalisations each year due to work-related ill health. Cancer, respiratory disease, musculoskeletal disorders, heart disease and hearing loss are just some of these work-related health issues. The promotion of mentally healthy work environments and managing psychosocial risk are two emerging areas for all health and safety professionals to build skill and capacity.

Fourth, at a global level, there are rapid ongoing changes in the world of work, including the emergence of new technologies, new types of work and non-traditional forms of work organisation. These changes bring with them new risks, which the professional health and safety workforce has to be skilled and flexible enough to adapt to, and to reflect in their advice to workers, businesses and government agencies. Workforce planning needs to take account of these changes, particularly considering the need for disciplines to have ongoing professional development and to be connected to global networks of specialist knowledge.

Building the professions

A unifying theme throughout this report is the need to build professionalism across the health and safety workforce, a theme also highlighted by the Independent Taskforce.

According to the Australian Council of Professions, a profession is a "disciplined group of individuals who adhere to ethical standards and who hold themselves out as, and are accepted by the public as possessing special knowledge and skills in a widely recognised body of learning derived from research, education and training at a high level, and who are prepared to apply this knowledge and exercise these skills in the interest of others".³

The health and safety disciplines covered in this report face a number of barriers to consistently meeting this definition, including lack of resources and variation in regulatory frameworks.

In four of the disciplines, professional titles and scopes of practice are not subject to formal regulation. Professional associations are working to set standards, define competencies and achieve consistent education, training and professional development, often by linking with international bodies. These efforts have differing levels of maturity and acceptance.

Three disciplines fall within a well-developed regulatory framework for health professionals. However, people within these disciplines specialising in workplace health and safety do not necessarily have access to the same resources and structures to support professional development as their colleagues working in the public health system.

The Independent Taskforce recognised that building the health and safety professions is a matter of public interest that will not be achieved through the market alone, nor can the professional associations necessarily do this by themselves, especially when they are small in number. Therefore, this report not only includes recommendations for developing workforce capacity and capability but also identifies how various stakeholders can support this.

Structure of the report

This report is divided into two broad sections.

The *Findings and recommendations* section summarises the report's findings and offers recommendations under six categories:

1. Scope and role of disciplines
2. Competency frameworks
3. Education and training pathways
4. Workforce supply and demand
5. Professional development and leadership
6. Enabling recommendations.

For each theme, the report summarises the project findings, explains why they matter and makes recommendations. It also identifies who can help implement the recommendations, using the RASCI format (responsible, accountable, support, consult, inform). 'Traffic light' colour coding indicates the relative urgency of action around the status of competency frameworks, education and training pathways, and workforce supply and demand in the *Findings and recommendations*.

About the disciplines section provides overviews of each of the seven disciplines, including the discipline's scope and roles, key knowledge and skills, education and training pathways, and current supply and demand issues. The 'traffic lights' also show the current situation for each discipline in the three key areas mentioned above.





Findings and recommendations

- 1** Improve understanding of the disciplines
- 2** Develop and adopt appropriate competency frameworks
- 3** Improve accessibility and quality of education and training pathways
- 4** Meet current and future demand
- 5** Improve access to continuing professional development
- 6** Get the best out of professional health and safety associations and networks

1

Improve understanding of the disciplines

RECOMMENDATION

- 1.1** Further develop existing processes for health and safety disciplines to agree their scopes, roles and relationships, including protocols for consultation or referral.
- 1.2** Ensure that professional ethics and understanding of related disciplines are incorporated into health and safety education programmes.
- 1.3** Develop guidance and information for businesses, clarifying the roles and value of the various health and safety disciplines, including what 'competency' looks like.

WHO COULD HELP DELIVER IT

Responsible: H&S professional associations

Accountable: HASANZ

Support: H&S professionals, education providers

Consult: WorkSafe, unions, H&S-related industry associations

Inform: business associations, ACC

The goal we're seeking

We are seeking a shared understanding by professional groups, businesses, government agencies and other stakeholders of the roles and expertise of the various health and safety disciplines, the value they offer, and how they interact.

What we found

The project identified that businesses, government agencies and other stakeholders do not always fully understand what the various health and safety disciplines do or how they can add value. In some areas, the professionals within the disciplines themselves need to work further on mutual understanding of their respective roles and expertise.

Why this matters

Without a good understanding of professional scope and roles, businesses may engage someone from the wrong discipline or without the required level of competence, or they may fail to appreciate the need for disciplines to work together on an issue. They might also engage with disciplines on a limited or reactive basis because they do not appreciate the benefits of more integrated or preventive approaches.

Summary of findings

A key finding from this project was the need for improved understanding of the scope and roles of health and safety disciplines. Professional groups reported that businesses often do not understand what the various disciplines do, how they interact, and where they can add value.

The disciplines sometimes contribute to this lack of understanding. Professional associations have made significant progress in mutual understanding, especially at a national level, while still needing to clarify their roles and interactions in some areas. However, understanding and collaboration is less consistent at local levels, especially for the non-regulated disciplines. Experiences with implementing the HASANZ Register has shown that there are still some differences in the perspectives of the various disciplines about scopes of activity and the expertise required for each of the various roles.

This can be addressed by further collaborative work between the disciplines at national and local levels. This might include protocols for referral or consultation, shared messages for businesses, development of case studies and clarity on any 'hard boundaries', such as activities that only those with expertise in a specific discipline can undertake. Alongside this, developing guidance and information for businesses can improve their general understanding about what the various disciplines do, how they add value, what competency means, and what kind of ongoing professional development they need.

Health and safety generalists also have a key role in improving understanding, given they are often the main source of advice for businesses about which discipline/s should be involved to resolve an issue. Strong knowledge of the roles of other disciplines is part of the generalist competency framework. Also important are professional ethics, which require practitioners to acknowledge the limits of their scope and not work beyond their level of competency.

Table 2 (page 18) summarises some of the key concerns that were raised about the understanding of scope, roles and expertise within each discipline.



DID YOU KNOW

Many businesses do not fully understand what the various disciplines do and the value they offer.



Table 2: Issues raised in relation to scope and roles of health and safety disciplines

DISCIPLINE	ISSUES RAISED
Health and safety generalists	Health and safety generalists are happy to identify themselves as ‘general practitioners’ with broad rather than deep expertise. They see their role as engaging with and supporting businesses and workers to enable good work, whereas others sometimes see them as ‘policemen’ or ‘problem solvers’. They face the challenge of driving a move from a compliance focus to an approach based on continuous improvement. The generalist health and safety associations have competency frameworks and are working to improve consistency of education provisions, professional expectations and job titles. However, this is proving challenging to fully implement as the discipline is non-regulated, and membership of the health and safety associations is not compulsory.
Hazardous substances professionals	Hazardous substances professionals report strong demand from businesses for help to interpret and comply with hazardous substances regulations and manage risks. However, regulations restrict compliance certifiers from offering advice or training to businesses they certify. As discussed elsewhere in the report, there is no broad competency framework for hazardous substances professionals and there are very limited training opportunities in the discipline. This makes it confusing for businesses to know where to seek advice.
Occupational hygienists	Occupational hygienists have identified a lack of awareness or appreciation for the expertise needed to undertake complex health risks assessments and carry out exposure monitoring. This is changing gradually, with WorkSafe’s guidance placing increased emphasis on occupational hygiene expertise. In addition, lack of knowledge of the health benefits of controlling work exposures can make businesses reluctant to meet the cost of occupational hygiene services.
Occupational health nurses	Occupational health nurses report there is often limited understanding of the benefits they can offer businesses and workers. They may be engaged in limited roles such as compliance-based health monitoring, without an appreciation of the wider range of skills, knowledge and experience they bring to prevent and manage a wide range of health risks, promote wellbeing and support productive work. In addition, occupational health nurses have identified relatively low financial rewards in proportion to the expertise they offer and limited opportunities for management or leadership roles.
HFE professionals	HFE professionals have experienced a generally poor understanding of their role and expertise across businesses, government agencies and even other professionals. This includes use of the term ‘ergonomic’ in a limited way to refer to the adjustment of equipment or management of physical movement, whereas HFE professionals always consider the wider psychosocial and organisational context alongside the physical environment. HFE professionals note that the value they can add is underappreciated, especially by large businesses and government agencies. At present they are often engaged in a reactive way to deal with problems, rather than at the design stage where they can add most value.
Occupational therapists	A challenge raised by both occupational therapists and occupational health physiotherapists is getting businesses to see the benefit of investing in injury prevention programmes and other proactive interventions. Professionals note they are often required to work on narrow terms, getting clients back to work as quickly as possible, without being able to explore the wider organisational context in which injury and illness has occurred. Both disciplines reported working well together, acknowledging shared capabilities as well as areas of specific disciplinary expertise, which the other discipline can draw on through consultation or referral.
Occupational health physiotherapists	

**DID YOU KNOW**

Health and safety generalists have a key role in improving understanding, given they are often the main source of advice for businesses.

2

Develop and adopt appropriate competency frameworks

RECOMMENDATION

- 2.1** For any discipline or speciality area that does not have one, develop a competency framework that clearly sets out the knowledge, skills and professional qualities needed to be competent in the discipline.
- 2.2** Where fit-for-purpose competency frameworks exist, promote their recognition and adoption by those working in the profession, educational institutions and other key stakeholders.

WHO COULD HELP DELIVER IT

Responsible: H&S professional associations

Accountable: HASANZ

Support: WorkSafe, licensing or accreditation bodies

Consult: education providers

Inform: businesses, unions

The goal we're seeking

We are seeking clear frameworks that outline the knowledge, skills and personal attributes required to work in each discipline within the health and safety workforce.

What we found

The project found that not all the disciplines have an agreed competency framework that clearly outlines the knowledge and skills required to work in the discipline, and that is acknowledged by all key stakeholders.

Why this matters

The lack of a clear competency framework can create uncertainty for new entrants and existing professionals wanting to achieve or maintain competency, and for institutions designing education and training programmes. It can also result in confusion from businesses about what competency looks like when engaging or hiring a professional.

Summary of findings

The project found that the disciplines regulated as health professions under the Health Practitioners Competence Assurance Act 2003 (nursing, occupational therapy and physiotherapy) have clear competency frameworks for the discipline but not necessarily for the specialist area of work health and safety. For non-regulated disciplines, competency frameworks are the tool used to certify those people belonging to relevant associations. However, these competency frameworks are in varying stages of maturity. Table 3 (on page 22) summarises the status of competency frameworks for the seven disciplines covered in this report. It shows that the key issues are the lack of a framework for hazardous substances professionals and the partial adoption of frameworks for generalists and HFE professionals.

In the hazardous substances field, regulations define broad knowledge and experience requirements for compliance certifiers, which WorkSafe applies on a case-by-case basis when issuing authorisations. However, there is no independent competency framework for the variety of roles in the hazardous substances profession, which include compliance certifiers, consultants and training facilitators. This is an issue both for those seeking to enter the discipline and for businesses seeking to evaluate the quality of advice or identify suitable worker training relating to hazardous substances.

For health and safety generalists, the International Network of Safety and Health Professional Organisations (INSHPO) has developed a comprehensive capability framework (published in 2017) which defines the knowledge and skills needed by generalists working in the various roles. It aims to provide benchmarks for education and training bodies and professional associations as they develop details of certification schemes, educational programmes and CPD. This framework has yet to be fully implemented in New Zealand and is not yet widely recognised by tertiary institutions offering qualifications in health and safety.⁴

Occupational health nurses, occupational therapists and occupational health physiotherapists are all small groups within much larger professions and are therefore required to align with general disciplinary competencies. However, there may be opportunities to better define the specific knowledge and skills for these groups. This could inform the development of more appropriate postgraduate education and greater recognition of their specialist capability in work health and safety.










DID YOU KNOW

Competency frameworks set out knowledge, skills and personal qualities required to work in a discipline. At present competency frameworks in the health and safety sector are at variable stages of maturity.

⁴ The New Zealand Institute of Safety Management (NZISM) has adopted the INSHPO framework. The New Zealand Safety Council (NZSC) recognises the INSHPO framework along with the Australian Institute of Health and Safety (AIHS) Body of Knowledge and the competencies established by the American Society of Safety Engineers (ASSE). NZSC has some differences from INSHPO regarding the core elements of knowledge and skill for health and safety professionals and practitioners.

Table 3: Status of competency frameworks by discipline

DISCIPLINE	STATUS OF COMPETENCY FRAMEWORK	
Health and safety generalists	A capability framework has been developed by INSHPO. This has only been partially adopted in New Zealand and has not yet been widely incorporated into the design of education programmes.	
Hazardous substances professionals	Broad requirements for working as a compliance certifier are set by regulations and applied in WorkSafe's authorisation process on a case-by-case basis. However, there is no independent competency framework for the variety of hazardous substances-related roles.	
Occupational hygienists	The New Zealand Occupational Hygiene Society (NZOHS) recognises the competency framework established by the International Occupational Hygiene Association (IOHA). It reflects this in its professional membership requirements and guidance on educational programmes.	
Occupational health nurses	The New Zealand Occupational Health Nurses Association (NZOHNA) has developed a voluntary Knowledge & Skills Framework that aligns with the NZ Nursing Council competencies for registered nurses and can be used for applications to join the HASANZ Register. Further work is needed to link this to education programmes.	
HFE professionals	The Human Factors and Ergonomics Society of New Zealand (HFESNZ) endorses the education and training framework established by the Centre for Registration of European Ergonomists (CREE). This is not yet recognised by all stakeholders and has not been linked to a New Zealand education programme.	
Occupational therapists	Disciplinary competencies are defined by the Occupational Therapy Board of New Zealand (OTBNZ). ACC contracts set education and experience requirements for those working in work rehabilitation and injury prevention, but these do not constitute a competency framework.	
Occupational health physiotherapists	Disciplinary competencies are defined by the Physiotherapy Board of New Zealand (PBNZ). ACC contracts set education and experience requirements for those working in work rehabilitation and injury prevention, but these do not constitute a competency framework.	

COMPETENCY FRAMEWORK

Robust framework defined and in use.
May be room for improvements.



Framework(s) exist but may be incomplete or
not fully accepted or implemented.



No broad framework covering
the discipline.

**DID YOU KNOW**

The lack of a competency framework can create uncertainty for professionals, education institutions and businesses.



3

Improve accessibility and quality of education and training pathways

RECOMMENDATION

- 3.1** Develop consistent mechanisms for accrediting qualifications or programmes of education to ensure they align with competency frameworks.
- 3.2** Work with education providers to develop new courses in New Zealand in disciplines where there are current or potential future shortages.
- 3.3** For specialist disciplines that cannot be supported by New Zealand-based courses, develop and support alternative ways of accessing appropriate education.
- 3.4.** Develop vocationally-based methods to build and recognise competence which are equivalent in quality and stature to tertiary study.
- 3.5.** Investigate whether an RPL assessment framework can be used to help people with appropriate skills and experience to gain qualifications in relevant disciplines.

WHO COULD HELP DELIVER IT

Responsible: H&S professional associations

Accountable: HASANZ

Support: education providers

Consult: H&S professionals

Inform: WorkSafe, businesses

The goal we're seeking

We are seeking to improve access to education and training across the health and safety disciplines to provide clear and accessible pathways to competency for those entering the disciplines, and to ensure a sustainable supply of qualified professionals.

What we found

There are significant gaps in education and training pathways for many disciplines. For the specialist disciplines with small numbers of practitioners, there is limited or no access to appropriate tertiary education in New Zealand, while, in some other areas, education programmes are not aligned with disciplinary frameworks or are of inconsistent quality.

Why this matters

Gaps in education and training pathways make it difficult for new entrants to become competent, and thus represent a key barrier to building workforce capacity and capability.

Summary of findings

The project found that there are a number of key gaps in education and training pathways that vary across the disciplines but have in common the lack of a strategic approach to health and safety workforce development. Table 4 (on page 27) summarises the education and training pathways for each discipline, showing that all face barriers except occupational therapy and occupational health physiotherapy.

Availability of education programmes in New Zealand

For some disciplines there is no single programme of study people can undertake at a New Zealand tertiary institution that covers all required learning areas. For small, specialist disciplines such as occupational hygiene and HFE, low student numbers make it uneconomic for tertiary institutions to develop and run courses under the current funding model. In some cases, there is a shortage of suitably qualified people in New Zealand to teach, or relevant expertise to spread across multiple institutions.

There are a number of ways that these issues could be addressed, including through partnerships with overseas institutions, scholarship programmes and innovative models involving coordination between New Zealand institutions. Some of these options are being explored in current work on occupational hygienist workforce development and through the HASANZ scholarships programme, but further work is needed.

In some areas, institutions may have sufficient capacity but this is not coordinated with or aligned to the educational needs of disciplines. For example, several institutions offer both occupational health and safety and nursing qualifications at postgraduate level, but there is no programme in occupational health nursing. Occupational health nurses commonly undertake study in general health and safety, while having to separately meet other learning needs such as spirometry and audiometry training. By contrast, in Canada, there are several dedicated programmes for occupational health nurses, some in provinces with relatively small populations.

Alignment of education with competency frameworks

Ideally, education programmes should be designed to develop the knowledge and skills set out in a discipline's competency framework. However, in some instances, competency frameworks do not yet exist or have been developed recently, such as the INSHPO framework for generalists. Therefore, not all education programmes are aligned to current competency frameworks, making it difficult for new entrants to understand the difference between the various courses that exist, and the knowledge and skills they can develop by taking them.

Accreditation is a well-established process through which professional bodies can set standards for education programmes. It is used in New Zealand by registering authorities in health and other professions. In 2007, the Australian Institute of Health and Safety, the professional body for health and safety generalists, established the Australian OHS Education Accreditation Board.⁵ This Board reviews university-level health and safety professional education programmes and provides recognition for programmes that meet the agreed accreditation criteria. Accrediting qualifications would help set clear expectations for tertiary institutions and give prospective students

certainty, as well as giving a signal of quality to employers. New Zealand could learn from Australia's experience in this area.

Vocationally based pathways

As well as improving access to tertiary education, there is a need for flexible, non-traditional learning pathways, including vocational qualifications. A vocational qualification is a work-based way of learning that involves a range of on-the-job tasks and activities. It includes work-based and/or simulated work-based assessment designed to test a person's ability to do a job effectively based on recognised occupational standards. The qualification recognises a person's competence based on job performance, and so the learning process is built around a portfolio of work rather than exams.⁶

A vocational pathway could diversify the reach of health and safety careers and enable those who cannot go to university to build relevant competencies. It would also provide a more accessible pathway for health and safety representatives. A vocational pathway is most likely to be appropriate for the health and safety generalist and hazardous substances disciplines.



DID YOU KNOW

For some disciplines, there is no single programme of study people can undertake at a New Zealand tertiary institution that covers all required learning areas.

⁵ The Australian Institute of Health and Safety was previously called the Safety Institute of Australia.

⁶ The United Kingdom operates a vocational training system, with National Vocational Qualification Level 5 in Occupational Health and Safety Practice being equivalent to the National Examination Board in Occupational Safety and Health (NEBOSH) diploma and enabling membership of IOSH (the UK professional body for health and safety generalists) at the graduate level. This is the same level as students who have undertaken a university degree.



In some disciplines, there are a number of people who have significant experience but do not have appropriate qualifications, thus making it difficult for them to meet criteria for professional recognition. An RPL framework potentially offers a way to validate their skills and experience. This could help build support for professionalisation. An example of this approach is the Capable NZ programme run by Otago Polytechnic

Access to training and supervised work experience

All health and safety disciplines require practical work experience in addition to tertiary education. This often involves a period of supervised or mentored practice, with the time and level of oversight varying between disciplines.

In New Zealand, there are challenges for people entering health and safety disciplines to gain access to appropriate supervised experience, unlike the public health sector where this is a standard part of early career pathways. In the hazardous substances and occupational health nursing professions, supervised or mentored experience

was previously undertaken in public institutions that have been disestablished since the 1990s. Notably, these are the two areas with the greatest demographic pressures from workforce ageing.

Both the health and safety generalist associations, and the New Zealand Occupational Health Nurses Association (NZOHNA), have established mentoring programmes. However, it is worth exploring how access to supervised learning for early career professionals might be improved. This could include a system of formal posts or rotations, as in the health sector.

Table 4: Current education and training availability by discipline

DISCIPLINE	AVAILABILITY OF APPROPRIATE EDUCATION AND TRAINING	
Health and safety generalists	There are a range of tertiary qualifications in generalist health and safety, but many are not yet aligned with a recognised competency framework.	...
Hazardous substances professionals	There has been no formal education and training programme or qualification pathway in hazardous substances since the 1990s. ⁷ Small consultancies struggle to offer training and only limited workshop-based learning is available.	✗
Occupational hygienists	No New Zealand institution offers an appropriate tertiary education programme in occupational hygiene. Module-based education is available through NZOHS and work is underway to explore provision of a master's programme.	✗
Occupational health nurses	Occupational health nurses can undertake a range of relevant postgraduate education but there are no qualifications or courses dedicated to their specific needs.	...
HFE professionals	Several tertiary institutions offer courses with some HFE content. However, no one institution runs a programme linked to an overall HFE qualification.	✗
Occupational therapists	Occupational therapists can take a dedicated paper in vocational rehabilitation offered by two institutions and develop relevant knowledge and skills through other postgraduate programmes.	✓
Occupational health physiotherapists	Physiotherapists can take a dedicated paper in vocational rehabilitation offered by two institutions and develop relevant knowledge and skills through other postgraduate programmes.	✓

EDUCATION AND TRAINING

Education and training pathways exist in New Zealand. Quality or access improvements possible.



Education and training available in New Zealand but gaps in completeness, accessibility or quality.



Any education and training in New Zealand fragmented and difficult to access.

⁷ There is a qualification pathway for chemical engineers, but this is a specialised area, with most graduates working in large companies within the petrochemical and manufacturing industries.

4

Meet current and future demand

RECOMMENDATION

- 4.1** Undertake more detailed analysis to understand supply and demand issues for priority workforce areas (in particular health and safety generalists, hazardous substances professionals and occupational health nurses).
- 4.2** Based on this analysis, develop action plans for the priority areas, linking with the recommendations on education, training and continuing professional development.
- 4.3** Develop a strategy for attracting people into the disciplines that includes raising awareness of health and safety as a career, information about career options and pathways, and internships.

WHO COULD HELP DELIVER IT

Responsible: HASANZ

Accountable: H&S professional associations

Support: WorkSafe, ACC, professional recruitment/marketing services

Consult: career development professionals, tertiary education providers, Stats NZ

Inform: businesses

The goal we're seeking

We are seeking a sufficient supply of qualified health and safety professionals to meet demand now and into the future, particularly in priority areas that support the management of critical risks.

What we found

The project concluded that the professional health and safety workforce will have to grow significantly over the next decade to meet existing and future demand, including latent demand. This needs to involve an increase in workforce skill mix as well as numbers. The project also identified a number of short- to medium-term supply and demand pressures where more urgent action is needed.

Why this matters

Sufficient numbers of skilled professionals are needed to provide advice and services to help prevent harm to workers and support good work. Sustainable workforce growth is needed not only to continue meeting market demand into the future but also to improve equity of access for workers and businesses.

Summary of findings

To help estimate the current size of the specialist health and safety workforce and the growth needed to meet future demand, research was commissioned from MartinJenkins & Associates. Other insights were provided by individual disciplines or obtained from previous work.

Current workforce numbers

Table 5 (on page 29) summarises the estimated numbers of people working in the seven disciplines covered by this report. Due to differences in regulatory frameworks, definitions and data sources, the numbers have been estimated and reported in slightly different ways.

For the non-regulated workforce, the primary source of information was the membership lists of professional associations. Current members that have undergone a grading or certification process are counted as 'graded professionals' in Table 5, while 'total association members' includes associate, student, retired and corporate members.

All members of the regulated workforce (occupational health nurses, occupational therapists and occupational health physiotherapists) are counted as professionals since they are required to demonstrate continued competence to obtain a practising certificate. The total number of nurses working primarily in occupational health was obtained from the Nursing Council, but for occupational therapy and physiotherapy, the estimated proportion working in health and safety was obtained from surveys.

For some groups, there were alternative data sources. In a survey undertaken as part of this project, 43% of those describing themselves as health and safety generalists did

not belong to any professional association.⁸ From this, it was estimated that the total number of generalists is likely to be significantly higher than the number of association members. In addition, HFESNZ representatives were able to identify people within and outside the association who work at least part of their time in the HFE discipline.

For occupational hygiene and hazardous substances disciplines, only those working at a professional level are counted as part of the total estimated workforce in Table 5. A larger number have some skills and experience in these areas, most of whom belong to one of the other disciplines.⁹

Table 5: Current professional health and safety workforce in New Zealand (figures have been rounded)

DISCIPLINE	Graded professionals	Total association members	Total estimated workforce	Main data sources
Health and safety generalists	600	2,000	3,500	Census 2013. NZISM and NZSC membership lists and survey data 2019.
Hazardous substances professionals	75	200	75	WorkSafe authorised compliance certifier list. Membership nos. for HSPNZ and NZIHSM, 2019.
Occupational hygienists	50	100	50	NZOHS 2019 membership list.
Occupational health nurses	500	340	500	Nursing Council 2017 workforce statistics. NZOHNA membership nos. 2019.
HFE professionals	20	100*	70 (FTE)	HFESNZ membership list and estimates of people working in discipline, 2019.
Occupational therapists	100	0**	100	OTBNZ workforce statistics 2019 and workforce survey 2018.
Occupational health physiotherapists	200	0^	200	PBNZ workforce statistics 2018. PBNZ & PNZ workforce surveys 2018.
All disciplines	1,545	2,740	4,495	

*39 FTE.

**There are 1,200 members of the occupational therapy disciplinary association (OPTN-WNA). However, there is no association dedicated to occupational therapists working in health and safety.

^There are 500 occupational health physiotherapists in the occupational health special interest group (SIG) of the professional association, but not all members of this SIG work in health and safety.

⁸ This proportion is relatively high compared to other sources. In a 2019 survey conducted by *Safeguard* magazine, largely directed at those employed in industry, 31% of health and safety generalists indicated they did not belong to any professional association.

⁹ For occupational hygiene, this includes health and safety generalists and occupational health nurses with some education or training in the discipline. For hazardous substances it can include health and safety generalists as well as those from engineering, emergency services or industrial disciplines.

Projected future demand

To estimate the required workforce growth needed over the next decade, MartinJenkins combined the projected employment growth of 1.5% per annum in sectors with higher health and safety risks, with an additional 2.3% per annum growth to account for the desired increase in the ratio of health and safety professionals to workers. The total projected workforce growth of 3.8% per annum amounts to 45% over 10 years. This represents an increase from approximately 4,500 to 6,600 health and safety professionals between 2019 and 2029.

These projections require some important caveats. First, they do not account for workforce attrition through demographic ageing, migration and career change. Therefore, the projected increase of approximately 2,100 professionals requires education, training and recruitment pathways to deliver significantly more than this number, with the exact details varying by discipline. Second, these overall numbers do not account for skill mix. Workforce growth will have to be weighted towards developing a greater proportion of highly qualified specialist professionals than at present.

Existing and emerging skills shortages

In addition to the need for overall workforce growth, this project identified a number of short- to medium-term issues related to skill mix, demographic pressures and difficulties meeting existing demand.

Health and safety generalists

Although there are some uncertainties around the total numbers in the generalist workforce, available data allows some international comparisons of the numbers of qualified professionals.

In 2016, the United Kingdom's Institute of Occupational Safety and Health (IOSH) reported having 47,000 members. Considered in relation to the UK labour force, this represents about 1.4 members for every 1,000 workers. In New Zealand, the 2,000 members of the two professional associations amounts to 0.75 members for every 1,000 workers, around half the number in the UK.

However, the biggest difference is in the proportion of generalists operating at the highest professional level. IOSH reported a total of 12,880 chartered members (equivalent to the 'certified' level in New Zealand), which would equate to about 920 for New Zealand's working population. At present, New Zealand has fewer than 60 professionals with certified status.

While more work is required to compare numbers, this suggests that senior professionals form a significantly lower proportion of New Zealand's health and safety generalist workforce than would be expected in a mature health and safety system. This corresponds with anecdotal reports from businesses and recruiters that they are struggling to find suitable candidates for senior roles and are sourcing people from overseas.

Occupational hygienists

In 2018, WorkSafe and NZOHS undertook a benchmarking exercise which found that New Zealand had fewer qualified occupational hygienists per capita than comparable countries and about half as many as Australia. This supported anecdotal evidence of difficulties meeting the increased demand for occupational hygiene services, and reports from occupational hygienists that they are fully occupied. HASANZ and the NZOHS have a project underway to build capacity in the occupational hygienist workforce at various levels. Building capacity needs to continue as awareness grows of requirements for businesses to assess health risks and monitor exposures.

Hazardous substances professionals

The number of hazardous substances compliance certifiers in New Zealand has reduced significantly over the past five years to the current number of 75, due to retirements and some de-authorisations. Current certifiers report very high workloads. In the 2019 HASANZ/HSPNZ survey, 76% of respondents considered the demand for their services had increased over the past three years and the same proportion thought demand would continue to increase in the next three years. This workforce is also facing immediate demographic pressures. Two thirds of current certifiers are over the age of 55, with one third over the age of 65.

Growing demand is also reported for hazardous substances consultants and training facilitators as businesses attempt to understand their compliance requirements and manage their risks. These demands are difficult to meet, as compliance certifiers are restricted by law from providing these services, and there is currently no competency framework or education pathway for advice and training in hazardous substances.

Occupational health nurses

The NZ Nursing Council data shows that occupational health nurses are the oldest workforce of all nurses in clinical practice, with 67% over the age of 50. Although some experienced nurses move into occupational health at a later age, a membership survey by NZOHNA in 2018 found that two thirds of those over the age of 50 had been working in the area for 10 years or more. Current workforce numbers and overall experience levels will decline over time unless more nurses are attracted to the occupational health field. At the same time, demand is likely to increase along with the higher profile of work-related health and awareness of the value that occupational health nurses can offer.

HFE professionals

Analysis by HFESNZ indicates that the number of certified HFE professionals in New Zealand is only slightly lower than comparable countries on a population basis. However, the total number of full-time professionals is small (fewer than 20) and demand pressures are already emerging as businesses and government agencies start to become aware of the value that HFE professionals can offer in contributing to the design of good work and harm prevention, especially in relation to psychosocial and musculoskeletal risks.

Need for further work

Further work is needed to gain a detailed understanding of supply and demand issues in the health and safety disciplines, to be able to undertake short- and long-term planning. This includes understanding the following:

- » inflows from education, training, immigration and career change;
- » attrition from retirement, reduced working hours, emigration and career change;
- » true demand, using tools such as vacancy rates, population benchmarks and workload calculations. Estimating demand should take account of sectors (such as small business) that currently have poor access to health and safety services;
- » skill mix as well as total numbers.

Addressing supply and demand challenges will involve actions in the other areas discussed in this report, including competency frameworks, education and training pathways, professional development and support for associations. It also requires developing an attraction strategy that highlights the benefits of a professional career in health and safety.



DID YOU KNOW

Over 70% of health and safety practitioners have seen demand for services increase over the past three years. Over half expect demand to increase over the next three years.

Table 6: Supply and demand issues by discipline

DISCIPLINE	ABILITY TO MEET CURRENT AND FUTURE DEMAND	
Health and safety generalists	The size of the generalist workforce will need to increase to meet employment growth and to provide a higher ratio of professionals to workers. A key challenge is improving the skill mix, given New Zealand's relatively low numbers of highly qualified, experienced professionals.	...
Hazardous substances professionals	Current certifiers report difficulties in meeting demand and expect this to increase. There are significant demographic pressures, with two thirds of certifiers over the age of 55 and one third over 65.	✗
Occupational hygienists	The capability of the occupational hygiene workforce is low by international standards. Current work on building capacity needs to continue to meet existing and future demand. There is also a need for more people with technical knowledge, skills and experience in occupational hygiene.	...
Occupational health nurses	Two thirds of occupational health nurses are over 50, and many of these nurses have worked for more than 15 years in occupational health. Future retirements risk eroding not only workforce numbers but also experience levels. Demand is likely to increase as awareness of work-related health increases.	...
HFE professionals	The number of HFE professionals in New Zealand is only slightly lower than other comparable countries. However, demand is expected to increase, with the increasing recognition of the role that HFE professionals can play in preventing harm and promoting good work.	...
Occupational therapists	For both disciplines, the overall workforce is relatively young, and there is an established 'pipeline' for moving into work health and safety. Demand is likely to increase through growing recognition of the potential for occupational therapists and occupational health physiotherapists to contribute to harm prevention and promote good work.	✓
Occupational health physiotherapists		

SUPPLY AND DEMAND

No major immediate pressures.
May be longer-term challenges.



Challenges related to existing demand,
demographic pressures or skill-mix issues.



Significant short-term gaps without process
in place to address them.



5

Improve access to continuing professional development

RECOMMENDATION

- 5.1** Work to ensure that all those working in health and safety professions have access to appropriate CPD.
- 5.2** Support the development of career pathways within health and safety disciplines, including for both technical specialisation and people leadership roles.

WHO COULD HELP DELIVER IT

Responsible: H&S professional associations

Accountable: HASANZ

Support: WorkSafe, ACC

Consult: education providers, Institute of Directors, Business Leaders' Health & Safety Forum

Inform: H&S professionals

The goals we're seeking

We are seeking to ensure the workforce has access to appropriate continuing professional development (CPD) to maintain and further develop knowledge, skills and other professional qualities once competency is achieved.

We are also seeking to improve support for professionals as they move into either a leadership career pathway or a senior technical career pathway.

What we found

Access to CPD and career development differs across health and safety disciplines. For some professions, there is limited CPD available or there are barriers to access. Across the health and safety workforce, there is a relative lack of pathways into leadership positions.

Why this matters

CPD is essential for keeping up with and maintaining current best practice, and for further developing knowledge, skills and other professional qualities once competency is achieved. It also contributes to career development, supporting professionals to gain specialist technical expertise and/or develop into leaders who can make positive contributions at organisational, sectoral or national levels.

Summary of findings

The project found that access to appropriate CPD and career development pathways varied across professional groups. The regulated health professions have clearer expectations about access to CPD but do not necessarily have opportunities for career development. Priority issues include the lack of CPD opportunities for hazardous substances professionals and the relative lack of leadership opportunities across all groups.

Health and safety generalists

In a survey conducted as part of this research, more than 50% of generalist respondents were satisfied with their access to CPD, with fewer than 20% dissatisfied. This is consistent with the findings of the 2017 HASANZ/PwC workforce survey. However, there were a significant number of comments on the cost and time involved in obtaining CPD, indicating it may not be consistently supported by employers.

Another issue is the ability of mid-career health and safety professionals to access development opportunities relevant to the career pathway they are taking. Some follow a technical leadership pathway, further developing their technical knowledge and skills. Others follow a leadership pathway, meaning they need development relating to governance, leadership, communication, financial management and people management.

Occupational hygienists

CPD is compulsory for professional members of the NZOHS. However, there is limited access to appropriate CPD within New Zealand, and NZOHS reports using some of its limited resources to send members overseas for learning opportunities. The challenges in staying abreast of specialist knowledge are an important issue given the need to be aware of emerging risks to work health and safety, highlighted in a recent alert about risks from working with engineered stone.

Hazardous substances professionals

In a survey conducted as part of this research, 54% of the hazardous substances professionals who responded said they were dissatisfied or very dissatisfied with access to CPD. Those working with hazardous substances try to make the most of mentoring and peer support where available, but there are few opportunities within New Zealand for ongoing knowledge development apart from occasional workshops.

There is also a lack of knowledge development and training updates for other groups working with hazardous substances. In a survey conducted for this project, approximately 38% of generalist health and safety respondents noted hazardous substances as a secondary focus, commenting on difficulties in finding relevant CPD in this area.

HFE professionals

Certified professional members of HFESNZ must maintain professional development and this is reviewed at their required three-yearly recertification. Work is underway to bring in an annual CPD requirement across all professional membership categories.

Occupational health nurses, occupational therapists and occupational health physiotherapists

All the health professional groups must undertake CPD as a condition of maintaining their annual practising certificates with their respective registering bodies. These groups have a certain advantage in being able to combine postgraduate study, conferences and other continuing education from within their discipline as well as from general health and safety, occupational hygiene and HFE professionals.

However, an issue for all these groups is the relative lack of career development opportunities compared to their colleagues within the public health sector. Occupational health nurses in particular report frustration with the relatively few opportunities to obtain management or leadership positions.

The issues for each professional group and possible solutions require further investigation. Access to CPD and career development is often coordinated by professional associations, which links to the issues discussed in the following section: *Getting the best out of professional associations and networks*.



DID YOU KNOW

Currently, access to continuing professional development (CPD) differs across the disciplines. Those working in regulated health professions generally have clearer expectations and more structured availability of CPD.

6

Get the best out of professional health and safety associations and networks

RECOMMENDATION

- 6.1** Evaluate options to ensure health and safety professional associations have the capability and capacity needed to undertake the critical activities required to improve the capability and capacity of their members.
- 6.2** Develop an influence 'map' for health and safety that identifies the key influencers across the various parts of the system connecting each so that they can work together. Make the map publicly available and ensure it is regularly updated to maintain currency.

WHO COULD HELP DELIVER IT

Responsible: HASANZ

Accountable: HASANZ Governance Group

Support: H&S professional associations, WorkSafe, ACC

Consult: associations, organisations, influencers in the system

Inform: H&S professional associations, H&S professionals, H&S groups

The goals we're seeking

We are seeking to enhance the capacity of the professional associations that represent each discipline to provide leadership and support discipline-specific workforce development.

We are also seeking to connect with, learn from and influence the diverse health and safety groups, fora and networks in New Zealand.

What we found

Most health and safety professional associations have a small membership base and very limited resources, and operate on a largely voluntary basis.

There is a large number of formal and informal health and safety networks organised through business, sectoral or regional groupings. We do not yet have a good understanding of how these groups connect or the influence they exert.

Why this matters

Professional associations provide a number of essential functions, including setting and enforcing professional standards, influencing education, providing leadership and connecting their members to developments in the field. It is difficult for small and under-resourced associations to achieve much of this.

Networks provide an alternative, cross-disciplinary space that can connect people involved or interested in health and safety, including businesses and worker representatives and those not part of professional bodies. They are likely to have expertise in issues related to particular industry sectors and parts of the country, and to be conduits of influence in these areas.

Summary of findings

The project identified current issues for professional associations and also gathered information on health and safety-related groups and networks around New Zealand, the first time such a stocktake has been undertaken.

Professional associations

Most of the professional associations for the disciplines are small and voluntary, with extremely constrained resources in terms of finance, capability and time. They are often managed and run by individuals who work in those disciplines and not by professional association managers.

The lack of resources within most professional associations means they have limited ability or capacity to undertake projects such as developing competency frameworks, liaising with education providers and analysing workforce needs. Those running the bodies are often elected into voluntary leadership positions and are balancing full-time work with this role. Often the work that these associations undertake depends greatly on the goodwill and commitment of particular individuals, which is not sustainable over time.

Table 7 (below) summarises the size and resources of the professional associations for each discipline covered by this report. It shows that most have a relatively small membership base and no or minimal paid staff. In two disciplines – generalist health and safety and hazardous substances – professional membership is split between two associations. Occupational therapy and physiotherapy have larger disciplinary professional associations that cover occupational health and safety amongst other specialities and activities.

HASANZ provides a resource for leadership and coordination across the whole health and safety workforce, and has enabled significant progress on common issues and a number of specific workforce priorities. However, the individual associations could benefit from more support for discipline-specific workforce development and to meet the challenges associated with New Zealand's small size and isolation. Options include some form of shared services arrangement or similar collaborative arrangements.

Table 7: Health and safety professional associations in New Zealand

DISCIPLINE	PROFESSIONAL BODY	DESCRIPTION
Health and safety generalists	NZ Institute of Safety Management (NZISM)	Approximately 1,600 members. Paid CEO and paid part-time staff. National coverage.
	NZ Safety Council (NZSC)	Approximately 400 members. National coverage but with a specific focus in Auckland. Run by volunteers.
Hazardous substances professionals	Hazardous Substances Professionals New Zealand (HSPNZ)	Approximately 70 professional (full) members and associate members. Run by volunteers.
	New Zealand Institute of Hazardous Substances Management (NZIHSM)	Approximately 135 members. Run by volunteers.
Occupational hygienists	NZ Occupational Hygiene Society (NZOHNS)	Approximately 100 members (50 professional members). Voluntary leadership and a paid part-time administrator.
Occupational health nurses	NZ Occupational Health Nurses Association (NZOHNA)	337 members. Voluntary leadership team and a paid part-time administrator.
HFE professionals	Human Factors and Ergonomics Society of NZ (HFESNZ)	Approximately 100 members (fewer than 20 professional members). Voluntary leadership and a paid part-time administrator.
Occupational therapists	Occupational Therapy NZ-Whakaora Ngangahau Aotearoa (OTN-WNA)	1,231 members in total (unknown how many work directly in occupational health and safety). Has an Executive Director and other staff who are paid.
Occupational health physiotherapists	Physiotherapy New Zealand (PNZ) – Occupational Health Physiotherapy Special Interest Group (SIG)	PNZ has a CEO and 3,900 members. The SIG has about 510 members. PNZ has a Chief Executive and other staff who are paid.

Formal and informal networks

The project identified a significant number of formal and informal health and safety groups and networks in New Zealand. Table 8 (below) lists these groups and networks. This includes formal groups focused on particular industries, such as the Forest Industry Safety Council and Construction Health and Safety NZ, or focused on particular audiences, such as the Business Leaders' Health & Safety Forum. It also includes informal groups that focus on specific disciplines, are based in particular regions or are specifically for women.

These groups typically play a role in connecting the health and safety workforce to businesses in their local areas. They also connect members of the workforce to each other,

including people working in complementary health and safety disciplines. They provide an important mechanism for information sharing and can help those running harm prevention programmes to pass on information to businesses.

Currently, there is no map of this 'influence network' which would identify the relative influence of each group, their sphere of influence and the connections between them. Creating such a map would help regulators and others to harness the potential of these groups to provide insights into regions and industries and also to disseminate information out to the health and safety workforce, their employers and their business clients.

Table 8: Formal and informal health and safety networks and groups, identified in the research



NEW ZEALAND WIDE

Health and Safety Sector Groups

Health and Safety Sector Groups	Sector
Agriculture Leaders' Health and Safety Action Group (ALHSAG)	Agriculture
Business Leaders' Health & Safety Forum	Chief executives
Construction Health and Safety NZ (CHASNZ)	Construction
Forestry Industry Safety Council (FISC)	Forestry
Government Health and Safety Lead (GHSL)	Government
ShopCare	Retail and Supply Chain

Other groups Identified

Other groups Identified	Sector/Discipline
Australia and New Zealand Society of Occupational Medicine (NZSOM)	Occupational health professionals
Australasian Faculty of Occupational and Environmental Medicine (AFOEM)	Occupational health professionals
Electricity Engineers Association (EEA)	Engineers in the electricity sector
Emerging Safety Leaders	Special interest group within NZISM
Faculty of Asbestos Management of Australia and New Zealand (FAMANZ)	Asbestos
Fuel Distributors Industry Safety Committee	Transport
HASTAG (Health and Safety Training Advisory Group)	Business NZ H&S safety training and advisory group
Health and Safety Professionals NZ (HSPNZ)	Health and safety workforce and business
Health and Wellbeing Leaders Network NZ	Health and wellbeing leadership
Institute of Organisational Psychology New Zealand	Occupational health professionals
Log Transport Safety Council	Transport
MinEx	Mining
Moving and Handling Association of NZ (MHANZ)	Practitioners in moving and handling of people
National Association of Women in Construction (NAWIC)	Construction
New Zealand Health and Safety Professionals	Health and safety workforce
NZ Society for Safety Engineering	Engineering
OCC Health and Safety NZ	Professionals in Occupational H&S
Port Industry Association	Port industry
Process Safety General Managers Forum	Process safety specialists – oil/gas, etc.
Road Transport Forum New Zealand	Transport
Site Safe NZ	Construction
Straterra	Mineral industry
Women in Safety	Special interest group within NZISM

REGION-BASED GROUPS

Northland

Group	Sector/discipline
Northland Health and Safety Forum	Regional H&S group
Northland Forestry Health and Safety Group	Forestry
Northland Wood Council	Forestry

Auckland

Group	Sector/discipline
NAWIC (Auckland)	Construction
NZ Refrigeration and Air Conditioning Network	Construction, refrigeration, engineering

Taranaki

Group	Sector/discipline
Naki Safety Group	Health and safety workforce and business
Taranaki Construction Safety Group	Health and safety workforce and business
NAWIC (Taranaki)	Construction
New Plymouth Injury Safe	Community H&S group

Bay of Plenty

Group	Sector/discipline
Te Roopu Marutau o Waiariki-Waikato	Māori H&S practitioners
Port Users' Health & Safety Forum	Port industry workers
EBOP Health and Safety Forum (SafeStaff)	Health and safety workforce and business

Hawkes Bay

Group	Sector/discipline
Hawkes Bay Safety Focus Group (HBSFG)	Health and safety workforce and business

Nelson/Tasman

Group	Sector/discipline
Nelson/Tasman Health and Safety Network	Health and safety workforce and business
Motueka Health and Safety Discussion Group	Health and safety workforce and business

Manawatu

Group	Sector/discipline
Manawatu Health & Safety Forum	Health and safety workforce and business

Wellington/Lower NI

Group	Sector/discipline
Hutt Valley Employers Health and Safety Forum	Health and safety workforce and business
NAWIC (Wellington)	Construction
Southern North Island Wood Council	Forestry

Marlborough

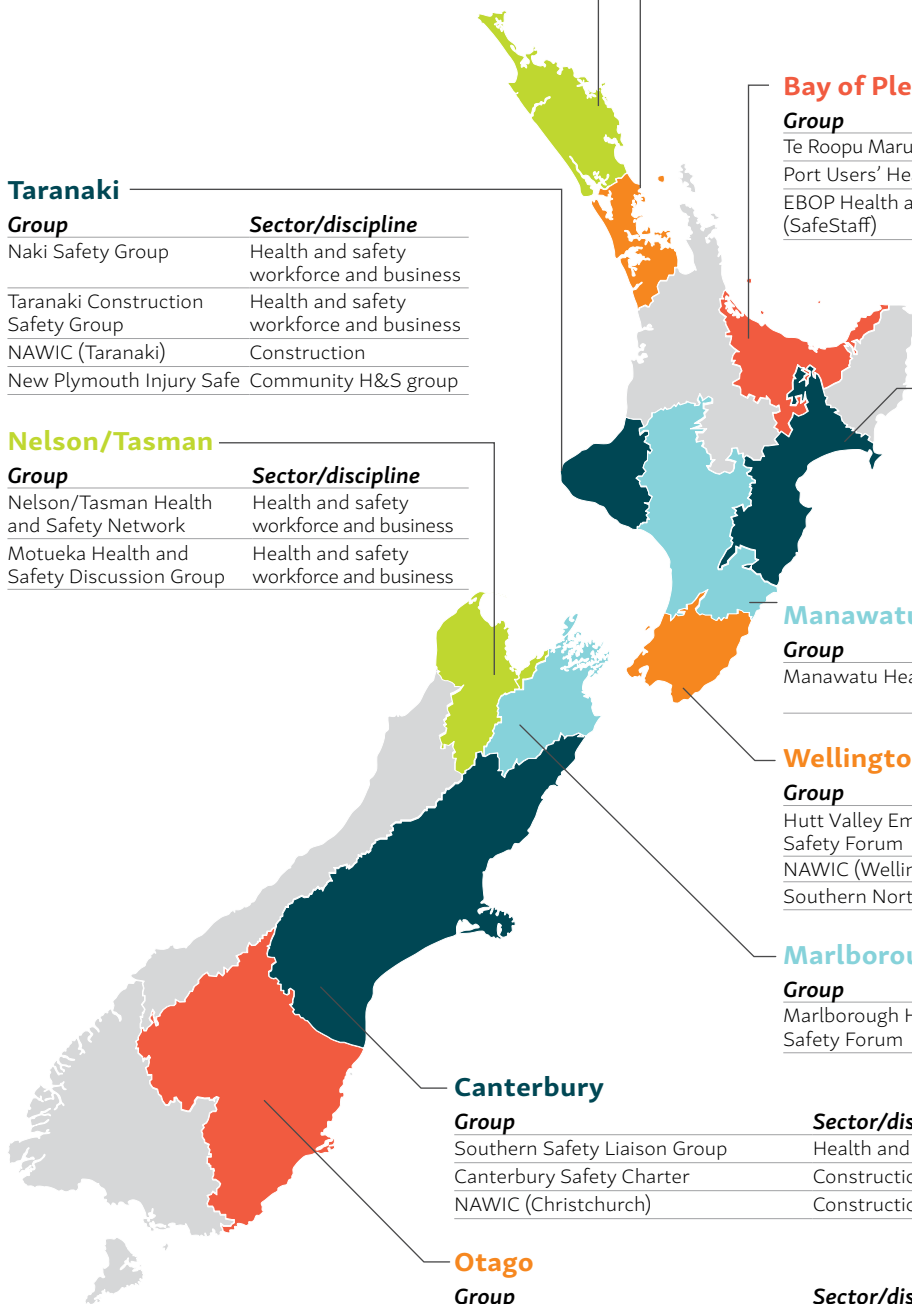
Group	Sector/discipline
Marlborough Health and Safety Forum	Health and safety workforce and business

Canterbury

Group	Sector/discipline
Southern Safety Liaison Group	Health and safety workforce
Canterbury Safety Charter	Construction
NAWIC (Christchurch)	Construction

Otago

Group	Sector/discipline
Central Otago Health & Safety Forum	Health and safety workforce and business
Central Lakes Safety Charter	Construction
CODC Health and Safety Committee	Health and safety workforce and business







About the disciplines

Health and safety generalists

Hazardous substances professionals

Occupational hygienists

Occupational health nurses

Human factors/ergonomics professionals

Occupational therapists

Occupational health physiotherapists

Health and safety generalists

What do health and safety generalists do?

Health and safety generalists design, implement and monitor systems to manage a broad range of health and safety risks. They also educate and influence workers and management to promote safe and healthy work environments. They have a good general knowledge of risk and risk controls, and they may have a deeper knowledge of specific industries or issues. Of all the disciplines, health and safety generalists are the most likely to be employed by businesses.

Competency & professionalism



Education, training & development



Supply & demand



The Occupational Health and Safety Professional Capability Framework: A global framework for practice (2017) (INSHPO Framework) was developed by the International Network of Safety and Health Professional Organisations (INSHPO). It distinguishes between:

- » health and safety *professionals*, who are key advisers to an organisation's leadership regarding occupational health and safety. They work across an organisation to identify, assess and manage a broad range of risks (including new or emerging risks); and
- » health and safety *practitioners*, who implement health and safety strategy and processes (usually across a single site) to manage well-defined risks.

While the two roles may overlap, role clarity is imperative in enabling organisations to improve their business, and health and safety, performance.

How do they relate to other disciplines?

The defining feature of generalists is their broad knowledge and range of skills and their coverage of a wide range of health and safety risks. They balance this broad knowledge with an awareness of their limits and an understanding of when to call on the specialist skills of other disciplines.

What roles do health and safety generalists work in?

Generalists work in a very wide range of roles and contexts, depending on their level of education and training and the industry in which they work. Jobs can range from being an adviser focused on technical processes and managing specific risks; to being a general manager who leads a team, develops systems across an entire organisation and advises the CEO and board; to being a consultant advising a diverse range of businesses.

What skills and knowledge do health and safety generalists need?

Health and safety generalists need to understand the principles of health and safety risk management and the regulatory framework relevant to the industry or industries they work in. They need to understand risk and risk controls relevant to the industry they work in. They need good communication and information management skills, and an understanding of organisational dynamics and how these are affected by economic and social issues. There are some differences in the extent and depth of knowledge and skills required by health and safety practitioners and professionals.

What are the requirements for practising as a health and safety generalist in New Zealand?

There are no legal requirements around practising as a health and safety generalist in New Zealand. However, New Zealand's professional associations, the New Zealand Institute of Safety Management (NZISM) and New Zealand Safety Council (NZSC), have both developed membership grading systems which allow members who meet defined criteria to list on the HASANZ Register. Yet, the 2019 HASANZ workforce survey found that almost half of those who identified as a health and safety generalist did not belong to any professional association. The INSHPO Framework for health and safety generalists is in the process of being adopted in New Zealand.

What are the pathways into the health and safety discipline in New Zealand?

There are multiple pathways to a career in health and safety. These can include working in safety-sensitive roles in industry, acting as a health and safety representative, or building on an academic background in science, engineering or management. All career pathways combine theoretical knowledge with practical experience, with the required mix depending on roles, responsibilities and industry context.

There are a number of qualifications in New Zealand aimed at health and safety generalists but not all are aligned with the INSHPO Framework (in part, because the framework is relatively new). This report recommends developing an accreditation process for health and safety qualifications. It also recommends developing vocational qualifications, and systems for recognition of prior learning to be expanded to allow alternative development pathways based on work experience.

How much do health and safety generalists earn?

HASANZ survey data in 2019 indicated that the median income was \$90,000-\$99,999 for those working full-time in the discipline, with 20% earning more than \$120,000. This broadly corresponds with other surveys such as those undertaken by Safesearch (Australian-based recruitment and consulting agency).

Supply and demand for health and safety generalists

High-level analysis indicates that 3,500 people are currently working in generalist health and safety in New Zealand. This number will need to increase to meet employment growth and a higher ratio of professionals to workers. A key challenge within this is improving skill mix, given New Zealand's relatively low numbers of highly qualified, experienced professionals. This requires both attracting new people into the profession and recognising and building on existing skills.

Summary of current situation for health and safety generalists

The health and safety generalist workforce faces multiple challenges related to consistent recognition and adoption of competency frameworks, quality and flexibility of education and training, and meeting demand, particularly for senior professionals.

Hazardous substances professionals

What do hazardous substances professionals do?

Hazardous substances professionals work to ensure controls are in place to manage risks from hazardous substances being manufactured, used or stored at work or being transported and disposed of. 'Hazardous substances' are defined by legislation¹⁰ using international classifications of materials that are explosive, flammable, oxidising, corrosive, toxic to people or the environment.

Competency & professionalism



Education, training & development



Supply & demand



How do they relate to other disciplines?

Hazardous substances professionals are identified by their explicit safety focus on the use, storage and transport of hazardous substances. This primarily means working to avoid acute harm from explosions, fires, leaks, spills, poisoning or environmental contamination. This differs from the focus on preventing harm to health from hazardous exposures during normal work, which is the priority of occupational hygienists. Hazardous substances professionals have more specialised knowledge and skills than health and safety generalists.

What roles do hazardous substances professionals work in?

There are several roles and activities within the hazardous substances discipline:

- » Chemical or process engineers design, develop and implement processes for using chemicals in industry, including hazardous substances.
- » Compliance certifiers conduct detailed inspections and issue certificates to confirm that an organisation or item of equipment complies with regulations on the use and storage of hazardous substances.¹¹
- » Hazardous substances consultants advise businesses on how to use, store and transport hazardous substances, and help businesses prepare for compliance certification.
- » Hazardous substances training facilitators train workers in the safe use, handling, manufacture, storage and disposal of hazardous substances.

What skills and knowledge do hazardous substances professionals need?

All hazardous substances professionals need to understand the physio-chemical behaviours and biological effects of hazardous substances, their use in industrial settings, and the regulatory requirements in place to protect people and the environment. They should also have practical experience of working with hazardous substances and relevant equipment, infrastructure and instruments.

¹⁰ Hazardous Substances and New Organisms Act 1996.

¹¹ Health and Safety at Work (Hazardous Substances) Regulations 2017.

Some areas of compliance certification or consultancy advice require specialised engineering knowledge.

What are the requirements for practising as a hazardous substances professional in New Zealand?

Chemical engineers can obtain internationally recognised registration as a chartered engineer with Engineering NZ. The only other professional recognition is authorisation by WorkSafe as a compliance certifier, which is issued on a case-by-case basis for limited time periods. Neither Hazardous Substances Professionals New Zealand (HSPNZ) nor the New Zealand Institute of Hazardous Substances Management (NZIHSM) has formal competency frameworks that hazardous substances professionals must meet to become a member. Furthermore, there are no formal requirements for offering consultancy advice on hazardous substances. At present, the hazardous substances discipline does not have an independent system of registration or professional recognition and there is no broad competency framework covering the discipline. This is an issue both for those seeking to enter the discipline and for businesses seeking to evaluate the quality of advice or training facilitation.

What are the pathways into the hazardous substances discipline in New Zealand?

Many hazardous substances professionals have science and/or engineering qualifications. Some enter the profession following long experience working with hazardous substances in industry or in a regulatory body. Historically, hazardous substances professionals learned their discipline within government agencies (i.e. Department of Labour) that provided inspection and licensing services. However, since these agencies were disestablished there has been no clear education and training pathway. There are also challenges in obtaining continuing professional development (CPD). The 2019 survey of compliance certifiers¹² found that 54% of respondents were dissatisfied or very dissatisfied with their access to CPD.

How much do hazardous substances professionals earn?

The 2019 HSPNZ/HASANZ survey found that the median income was \$90,000-\$99,999 for those working full-time in the discipline.

Supply and demand for hazardous substances professionals

The number of compliance certifiers has reduced over the past five years to the current total of 75, due to retirements, some de-authorisations and challenging working conditions. Current certifiers report difficulties in meeting demand, and the 2019 survey found that 76% of respondents thought that demand would continue to increase over the next three years. There are also significant demographic pressures, with two thirds of certifiers over the age of 55 and one third over 65.

Summary of the current situation for hazardous substances professionals

There are significant current challenges for the hazardous substances workforce with regard to professional competency frameworks, education and training, and meeting demand in the short and longer term.

Occupational hygienists

What do occupational hygienists do?

Occupational hygienists focus on preventing adverse health effects from exposures during work. They anticipate, evaluate and advise on ways to control exposure to workplace hazards – particularly hazards classed as physical (noise, radiation, temperature), chemical (dust, gases, fumes) and biological (viruses, bacteria, moulds).

Competency & professionalism



Education, training & development



Supply & demand



How do they relate to other disciplines?

Occupational hygienists' point of difference is their expertise in anticipating, evaluating and controlling exposures that can affect worker health. While health and safety generalists have a basic understanding of health risks and controls, only qualified occupational hygienists can oversee a complex evaluation of exposures at a worksite. Their focus on controlling health risks from exposures is complementary to hazardous substances professionals' emphasis on safety measures for volatile or toxic substances, and the expertise of occupational health nurses and medical practitioners on the health effects at a personal level.

What roles do occupational hygienists work in?

In New Zealand, most occupational hygienists work in a consultancy providing services to a range of businesses, while some are employed by government or by private businesses, usually in manufacturing or extractive industries. A 2018 survey by the New Zealand Occupational Hygiene Society (NZOHS) found that over 80% of respondents worked in consultancies.

What skills and knowledge do occupational hygienists need?

Occupational hygienists need a good understanding of the health effects of physical, chemical and biological hazards and the underlying science. They need to understand techniques for measuring and interpreting exposures, and approaches to implementing and evaluating controls. They must be familiar with relevant regulations and risk management principles and should have a solid grounding in communication and ethics.

What are the requirements for practising as an occupational hygienist?

NZOHS has established criteria for recognition as a fully qualified occupational hygienist which follow the recommendations of the International Occupational Hygiene Association (IOHA). NZOHS members who meet the criteria for fully qualified status can list on the HASANZ Register. Competency requirements for occupational hygienists are indirectly supported in regulations under the Health and Safety at Work Act 2015.

Internationally recognised certification as an occupational hygienist can be obtained through national certification programmes accredited by IOHA, which usually involve written and/or oral examination. New Zealand does not have an accredited certification programme, but a number of New Zealand occupational hygienists have obtained certification through another country's programme.

What are the pathways into the occupational hygiene discipline in New Zealand?

Becoming a qualified occupational hygienist requires appropriate academic study (usually a base degree in science or engineering) and at least five years of additional study and work experience. Becoming an occupational hygiene technician requires at least a year of work experience in addition to appropriate academic studies. Historically, there has been no clear education and training pathway for occupational hygienists in New Zealand. Many current occupational hygienists have worked or studied overseas.

Access to learning in occupational hygiene in New Zealand has improved recently, with the availability of technical modules designed by the international Occupational Hygiene Training Association (OHTA) and delivered by NZOHS. HASANZ and NZOHS are exploring options to make masters-level education available in New Zealand. Another challenge in New Zealand is gaining access to continued professional development, particularly in developing specialised knowledge within the field.

How much do occupational hygienists earn?

A 2018 survey by NZOHS found that the median income for members was \$70,000-\$100,000, with a third earning less than \$70,000 and a third more than \$100,000.

Supply and demand for occupational hygienists

At present, NZOHS counts 32 fully qualified occupational hygienists and 17 technicians within an overall membership of approximately 100. Work in 2018 by NZOHS and WorkSafe found that New Zealand had fewer qualified occupational hygienists than many comparable countries, with about half Australia's per capita number. A project to develop workforce capacity is already making progress but this needs to continue to meet current and future demand. There is also a need for more people with technical knowledge and skills in occupational hygiene.

Summary of current situation for occupational hygienists

Occupational hygiene has a clear and well-established international competency framework. Currently in New Zealand there are challenges to develop accessible education, training and professional development pathways and these are reflected in the ongoing challenges to meet current and future demand.

Occupational health nurses

What do occupational health nurses do?

Occupational health nurses are registered nurses with expertise in occupational health who help prevent work-related illness and injury and promote health, wellness and ability to work. They advise and support workers to prevent and manage work-related health risks, provide hazard-specific health monitoring, make recommendations, promote wellness, and deliver primary assessment, care and referral in the workplace. Experienced occupational health nurses may also be involved in health and safety planning and management.

Competency & professionalism



Education, training & development



Supply & demand



How do they relate to other disciplines?

The unique identity of occupational health nurses comes from their expertise in personal and population health as it relates to work. The occupational health nurse is the health navigator for workers, managers and employers, providing services, advice and leadership to help manage the effects of work on health and health on work, including both physical and mental health. They may be the only health professional a worker has contact with. Given their broad scope of activity, occupational health nurses have interactions with all other health and safety disciplines.

What roles do occupational health nurses work in?

Occupational health nurses work as employees or consultants across most sectors. A 2018 survey by the New Zealand Occupational Health Nurses Association (NZOHNA) found that 53% of respondents provided consultancy services, 30% were employed in industry, and the remainder had other working arrangements in private, public or community-based organisations. Some work in management or academia.

What skills and knowledge do occupational health nurses need?

Occupational health nurses have core nursing skills in clinical assessment and care, communication, professionalism and ethics. Competent occupational health nurses need to understand the regulatory frameworks, health risks and controls relevant to the industries they work in. They need to develop specific skills in health monitoring and other activities relevant to their work.

Occupational health nurses working at a proficient or advanced level further develop knowledge and skills in areas that may include health and safety management, occupational hygiene, ergonomics, rehabilitation and injury prevention, health promotion, mental health, drug and alcohol support, business management and research.

What are the requirements for practising as an occupational health nurse?

Occupational health nurses must have a current NZ Nursing Council practicing certificate. The NZOHNA has developed the Occupational Health Nurses Knowledge & Skills Framework. This is voluntary but is aligned with the Nursing Council's competency framework and allows occupational health nurses to show they are working at a competent, proficient or advanced level. Those working at a proficient or advanced level can apply to be listed on the HASANZ Register.

The membership of NZOHNA has grown, and members now account for approximately two thirds of all those who list occupational health as their main area of nursing practice on their Nursing Council practising certificate application. This indicates an increasing commitment to professionalism within the speciality.

What are the pathways into the occupational health nursing discipline in New Zealand?

Most occupational health nurses have previous experience in other areas of nursing, including public health/nutrition, primary care, surgical, medical, emergency, trauma or mental health nursing. They may develop expertise in work-related health following an event from practice in one of these areas or motivated by a goal to protect workers from harm.

Becoming a competent occupational health nurse requires taking relevant skills courses, such as audiometry, spirometry, vaccinations and drug testing, and working for six months under the supervision of an experienced occupational health nurse. Achieving proficient or advanced status requires postgraduate education alongside further practical experience. Currently in New Zealand, there is a range of postgraduate programmes and courses to gain relevant knowledge and skills but none specifically directed at occupational health nurses.¹³ This report identifies this as an important gap for the workforce, and proposes the adaptation of overseas models to make an occupational health nursing qualification available in New Zealand.

How much do occupational health nurses earn?

Base nursing salaries range from \$55,000 for a graduate to \$78,000 for an experienced nurse. Experienced occupational health nurses can earn higher rates. The 2016 Safeguard income survey found that the median salary for NZOHNA members was approximately \$80,000. Independent consultants can earn well in excess of \$100,000.

Supply and demand for occupational health nurses

The current number of nurses practising in occupational health is approximately 500, which will need to grow to meet future demand. An important challenge is the demographic ageing of the workforce. Two thirds of occupational health nurses are over 50, and many of these nurses have worked for more than 15 years in occupational health. Future retirements risk eroding not only workforce numbers but also experience levels.

Summary of current situation for occupational health nurses

The occupational health nursing workforce has an established competency framework, but this is not yet well linked to education and training opportunities. Demographic pressures are an important challenge for meeting future demand.

¹³ According to Nursing Council data from 2018, approximately 55% of nurses working in occupational health have a postgraduate qualification, one of the highest proportions among nursing speciality areas. This proportion is higher among NZOHNA members, with a 2018 survey finding that 60% of 155 respondents had a postgraduate qualification.

Human factors/ ergonomics professionals

What do human factors/ergonomics (HFE) professionals do?

HFE professionals advise on the design of products, processes, environments and work systems to support wellbeing, usability and performance. In work health and safety, they focus on designing and modifying work environments and work processes, and they have a particularly important role in reducing harm from musculoskeletal disorders, stress and poor work cultures.

Competency & professionalism



Education, training & development



Supply & demand



How do they relate to other disciplines?

HFE professionals principally focus on systems of work rather than individual workers, with the goal of improving both wellbeing and performance. While several health and safety groups include 'ergonomics' among their areas of knowledge and practice, this is usually limited to a restricted application of ergonomic principles, such as workstation assessments. The distinguishing feature of HFE professionals is that they always consider the wider physical, cognitive and organisational environment contributing to biomechanical or psychosocial risks and they make recommendations for design changes at multiple levels.

What roles do HFE professionals work in?

In New Zealand, most HFE professionals work as independent consultants or in academia undertaking systems-based research and teaching. Few are employed directly in businesses but increasing numbers are being employed in government and research agencies, notably in the health care sector.

What skills and knowledge do HFE professionals need?

HFE professionals need a broad base of knowledge in areas including anatomy and physiology, psychology and design. They need knowledge of how people and systems interact, and need to be able to apply a range of research and analysis methods to develop recommendations for designing or modifying physical, psychosocial and organisational characteristics of work environments.

What are the requirements for practising as an HFE professional?

There are no legal restrictions on practice in HFE in New Zealand. The Human Factors and Ergonomics Society of New Zealand (HFESNZ) has established a certification framework and is part of an internationally accredited certification system. Certified members can list on the HASANZ Register. However, at present not all those working in the field recognise the value of professional membership, while many businesses and some government agencies do not fully understand the role and value of HFE professionals and the need for ongoing professional development.

What are the pathways into the HFE discipline in New Zealand?

HFE professionals often have a background in a related profession such as health care, psychology, architecture, engineering or design. Becoming qualified requires a combination of tertiary education, supervised practice and professional experience. This involves the equivalent of at least one year's full-time study in HFE following three years of academic study in a relevant field. Following this, candidates need a year of full-time supervised training under a qualified HFE professional. Becoming certified requires at least two full-time years in HFE practice, at least one of which must be in New Zealand.

At present in New Zealand, no single tertiary education institution offers the full range of papers required for certification as an HFE professional. Although several institutions offer papers with HFE content, these are not linked to a recognisable HFE qualification, meaning that students are currently unable to complete all the required subject areas for certification. HFESNZ plans to work with one or more tertiary providers within or outside New Zealand to develop a complete HFE educational programme.

How much do HFE professionals earn?

International data suggests that graduates in HFE can begin with a salary of around \$50,000, while experienced professionals working as consultants can earn over \$120,000. This is borne out by New Zealand data, although numbers are small and not all those qualified in HFE work most of their time in the discipline. In a 2019 survey by HFESNZ, median earnings were \$80,000-\$89,999 for those working at least three-quarters of their time in the discipline, with 25% of all respondents earning over \$100,000.

Supply and demand for HFE professionals

The number of HFE professionals in New Zealand is similar to other comparable countries, per capita. However, demand for services is expected to increase with the increasing recognition of the role that HFE professionals can play in preventive and design-led approaches to work health and safety. In New Zealand, this means developing professionals with broad knowledge across the HFE discipline who can work in different contexts. Two thirds of the current workforce are over the age of 45, so the discipline will likely face some demographic pressures in the future.

Summary of current situation for HFE professionals

HFE has a well-established professional framework, but this is not recognised by all those working in the discipline or fully understood by other stakeholders. Access to education in New Zealand is currently fragmented and this presents a challenge for meeting future demand.

Occupational therapists

What do occupational therapists do?

Occupational therapists work to promote health and wellbeing through occupation. They enable people to participate in activities that they want, need or are expected to engage in, including by modifying the occupation and/or the environment. In the context of work health and safety, occupational therapists are most often involved in the rehabilitation of workers affected by physical and mental illness or injury. They also work to support people with low levels of mental health to stay at work and help them return to work following a period of absence. Their work includes helping people regain skills and advising employers on ways to adapt the work or workplace to support the worker. They sometimes also support businesses with harm prevention programmes.

Competency & professionalism



Education, training & development



Supply & demand



How do they relate to other disciplines?

What differentiates occupational therapists from other related disciplines is their strong focus on mental health. In their work with individual clients, they are often part of a multidisciplinary team that can include occupational health nurses and occupational health physiotherapists. When recommending changes to equipment or work environments, their roles can cross over with HFE professionals.

What roles do occupational therapists undertake in work health and safety?

In work-related practice, occupational therapists most commonly work in one of the companies accredited to ACC as lead providers of vocational rehabilitation services. Some work as independent consultants for private companies.

What skills and knowledge do occupational therapists need in work health and safety?

All occupational therapists have disciplinary knowledge, skills and values including practising appropriately for bicultural Aotearoa New Zealand, working collaboratively and meeting other professional and ethical responsibilities. Those working in the work health and safety context need to understand the kinds of activities people undertake in their jobs and the risks or impediments that can hinder them from participating in these activities in ways consistent with their wellbeing. They need to understand the regulatory context of work health and safety and develop their skills in collaborative practice to engage with multiple stakeholders, including workers, their families, employers, insurance companies and government agencies.

What are the requirements for practising as an occupational therapist in work health and safety?

As health professionals, occupational therapists are covered by the Health Practitioners Competence Assurance Act 2003. They must be registered with the Occupational Therapy Board of New Zealand (OTBNZ) and must obtain an annual practising certificate. The primary requirement for registration is a bachelor's degree in occupational therapy or a qualification assessed as similar by OTBNZ. All occupational therapists must have ongoing professional supervision.

OTBNZ does not have specialist requirements for working in the health and safety context. These have been established indirectly by ACC's standards for providers of contracted vocational rehabilitation services. These require at least 50% of clinical staff to have a minimum of two years' experience in vocational rehabilitation, and a postgraduate qualification in vocational rehabilitation or a 30-credit course in vocational rehabilitation if they have another postgraduate qualification. Clinical staff with less than 12 months' experience in vocational rehabilitation must have an induction or internship programme and receive supervision for at least 12 months.

What are the pathways into occupational therapy in work health and safety in New Zealand?

Most occupational therapists working in the work health and safety area have previous experience working in other physical or mental health settings. To meet ACC requirements, occupational therapists moving into health and safety often complete a postgraduate certificate in vocational rehabilitation. They can generally also obtain supervision or mentoring from one of the large companies designated as lead providers for ACC-funded vocational rehabilitation services.

Occupational therapists can develop knowledge and skills through postgraduate education in relevant areas, which may include further study in rehabilitation, mental health, general occupational health and safety, HFE, health and wellness promotion, management, education or research. Some may develop their careers by crossing over into areas such as HFE or general health and safety management.

How much do occupational therapists earn?

Figures are not available for occupational therapists specialising in work health and safety. However, indicative pay rates for occupational therapists employed by DHBs and the Ministry of Education in 2015 were \$46,915 at entry-level and \$83,637-\$96,278 for advanced practitioners.

Supply and demand for occupational therapists

About 4% of the approximately 2,500 practising occupational therapists in New Zealand work primarily in work health and safety. The overall workforce has grown steadily over the past decade, it is relatively young and there is an established 'pipeline' for moving into work health and safety. This offers a platform for meeting future demand growth. However, demand is likely to increase through growing recognition of the potential for occupational therapists to contribute to harm prevention and promote healthy work, particularly given increasing attention to addressing psychosocial risks at work.

Summary of current situation for occupational therapists

Occupational therapists moving into work health and safety have a clear education and training pathway which can potentially meet future demand for existing roles. To take advantage of the value they can offer in harm prevention and promoting good work, a specialist knowledge and skills framework and an improved professional development pathway may be needed.

Occupational health physiotherapists

What do occupational health physiotherapists do?

Occupational health physiotherapists are a specialist branch of physiotherapy who work with employers and employees to prevent and treat problems. They provide assessment, rehabilitation, advice and training to assist injured workers back into their jobs, and to enable them to remain employed. They also help prevent injuries for individuals or groups of workers. In New Zealand most occupational health physiotherapists provide vocational rehabilitation services for clients referred by ACC.

Competency & professionalism



Education, training & development



Supply & demand



How do they relate to other disciplines?

Occupational health physiotherapists are distinguished by their expertise in injury prevention, management and rehabilitation, especially relating to physical function and movement. In their work with individual clients they are often part of a multidisciplinary team that can include occupational health nurses and occupational therapists. When recommending changes to equipment or work environments, their roles can cross over with HFE professionals.

What roles do occupational health physiotherapists work in?

Occupational health physiotherapists most commonly work with companies accredited by ACC to provide vocational rehabilitation services. Some work as private consultants, working directly with client companies.

What skills and knowledge do occupational health physiotherapists need?

Occupational health physiotherapists need to have core knowledge and skills in physiotherapy assessment, analysis, planning and management. They need to have effective communication and educational skills and to apply professional and ethical principles. Working in occupational health requires an understanding of the work context of relevant industries, developing theoretical perspectives on work health and safety, further developing teaching and training techniques, and working with multiple stakeholders including workers, GPs, employers and insurance companies.

What are the requirements for practising as an occupational health physiotherapist in New Zealand?

Anyone practising physiotherapy must have an annual practising certificate from the Physiotherapy Board of New Zealand (PBNZ). Specific requirements for working as an occupational health physiotherapist have been established indirectly by ACC's standards for vocational rehabilitation service providers. These require at least 50% of clinical staff to have a minimum of two years' experience in vocational rehabilitation and a postgraduate qualification in vocational rehabilitation. Clinical staff with less than 12 months' experience in vocational rehabilitation must have an induction or internship programme and receive supervision for at least 12 months. Physiotherapists must also be part of the occupational health special interest group of Physiotherapy New Zealand.

Since 2013, PBNZ has established a process to obtain specialist registration, including in occupational health. However, the value of this process has not been widely recognised and by 2018 just eight people had obtained specialist registration across the entire discipline.

What are the pathways into occupational health physiotherapy?

Most occupational health physiotherapists employed in the work health and safety area have previous experience working in other physiotherapy settings. To meet ACC requirements, occupational health physiotherapists moving into health and safety often complete a postgraduate certificate in vocational rehabilitation. They can generally also obtain supervision or mentoring from one of the large companies designated as lead providers for ACC-funded vocational rehabilitation services.

Further professional development can be obtained through postgraduate education in relevant areas, which may include further study in rehabilitation, general occupational health and safety, HFE, management, education or research. Some may develop their careers by crossing over into areas such as HFE or general health and safety management.

How much do occupational health physiotherapists earn?

Salary figures are not available specifically for occupational health physiotherapists. The Auckland DHBs multi-employer agreement indicates that graduate physiotherapists start on a base salary of \$47,000, while physiotherapists with more than six years of experience earn \$68,000-\$99,000. Remuneration survey data from 2018 indicates that physiotherapists working at least 30 hours per week had an average income of \$73,395-\$87,264, with an average hourly rate of \$38 across the profession.

Supply and demand for occupational health physiotherapists

Around 4-5% of the approximately 5,000 practising physiotherapists in New Zealand work primarily in occupational health. The overall workforce has grown steadily over the past decade, it is relatively young and there is an established 'pipeline' for moving into work health and safety which offers a platform for meeting future demand growth. However, demand is likely to increase through growing recognition of the potential for occupational health physiotherapists to contribute to injury prevention and promote healthy work.

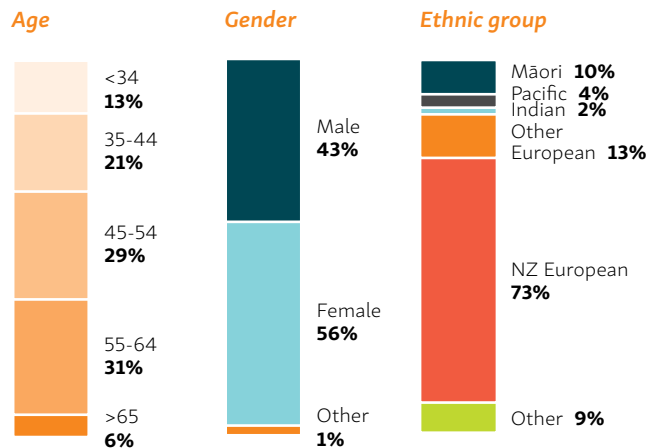
Summary of current situation for occupational health physiotherapists

Occupational health physiotherapists moving into work health and safety have a reasonably clear education and training pathway which can potentially meet future demand for existing roles. To take advantage of the value they can offer in injury prevention, a specialist knowledge and skills framework and an improved professional development pathway may be needed.

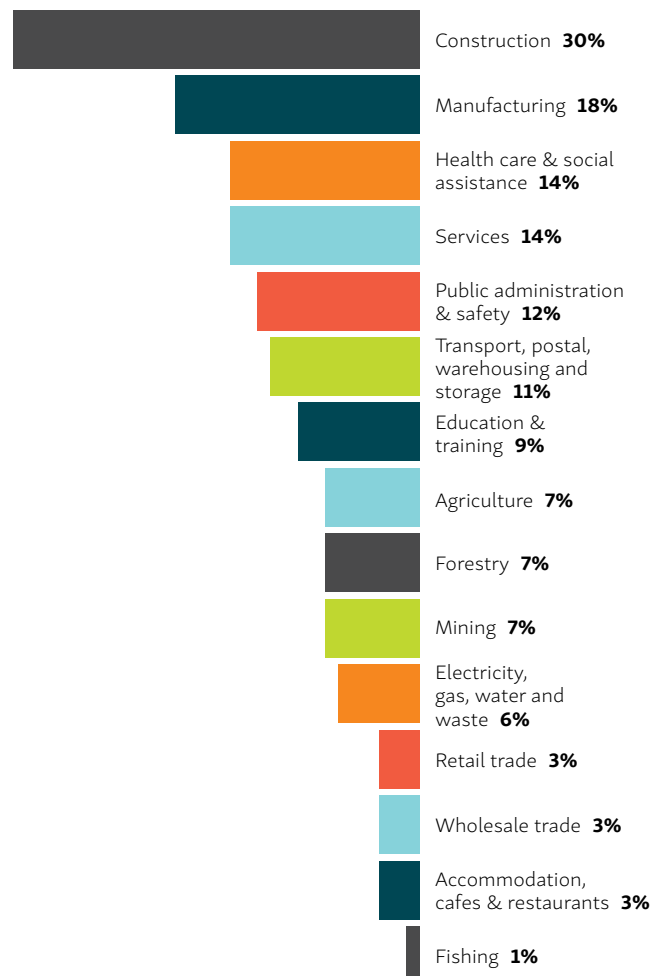
About the health and safety workforce

Here are key findings from a survey of the health and safety workforce undertaken in early 2019 by HASANZ as part of the research for this report. It was completed by over 250 people, about three quarters of them generalists.

Demographics

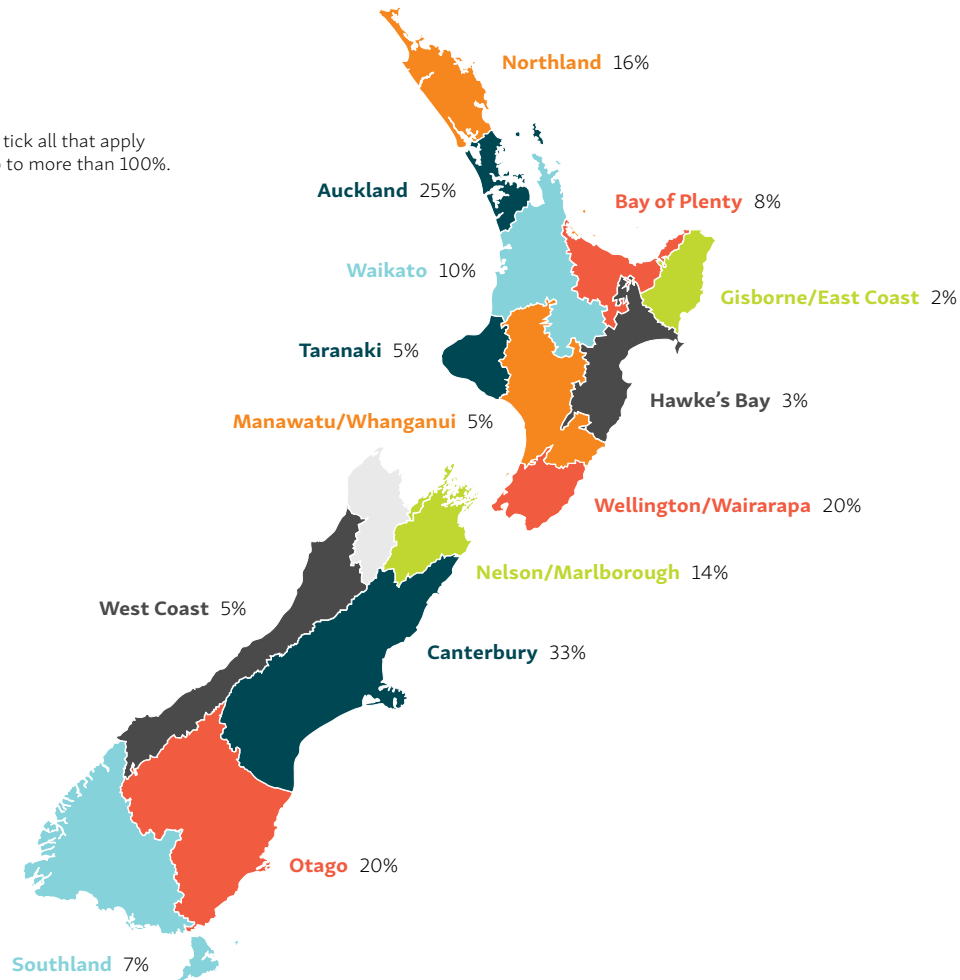


Industries worked in



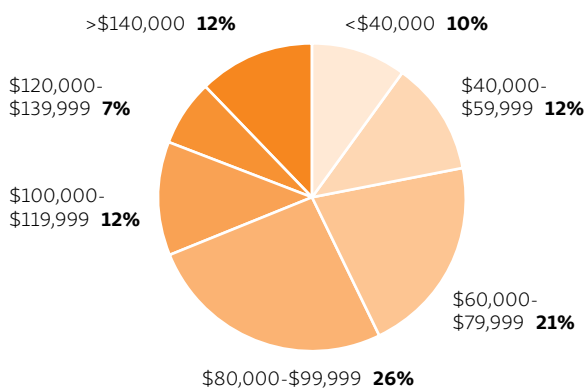
Regions worked in

Respondents asked to tick all that apply so percentages add up to more than 100%.



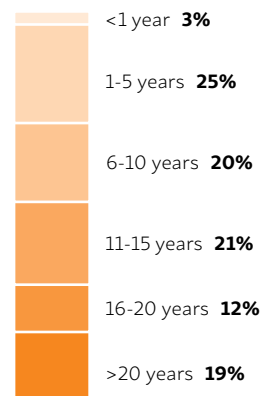
Remuneration

Net annual income before tax

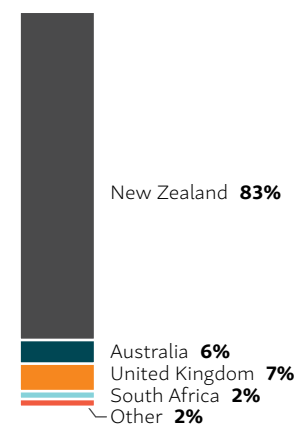


Career information

Length of time worked in H&S

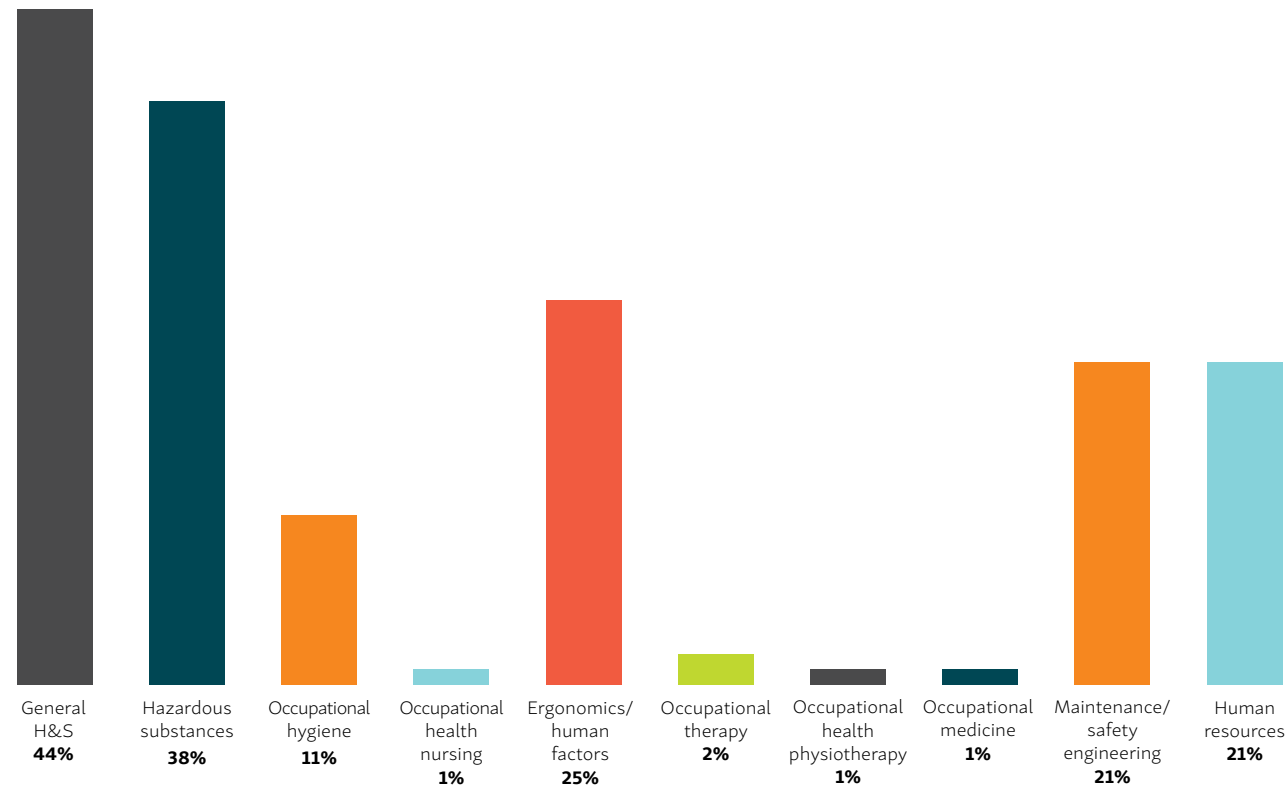


Country where H&S career began



Scope of activity

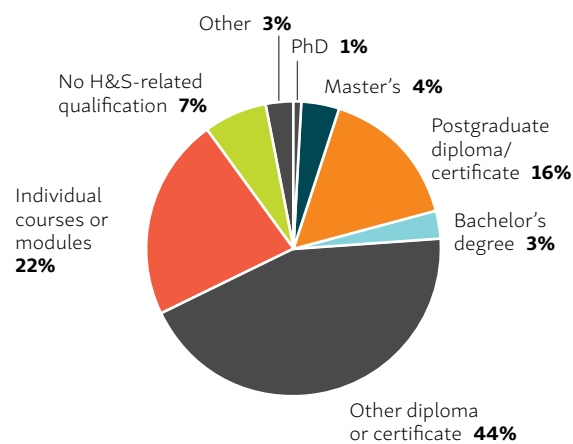
Other H&S-related disciplines you work in, apart from your primary discipline



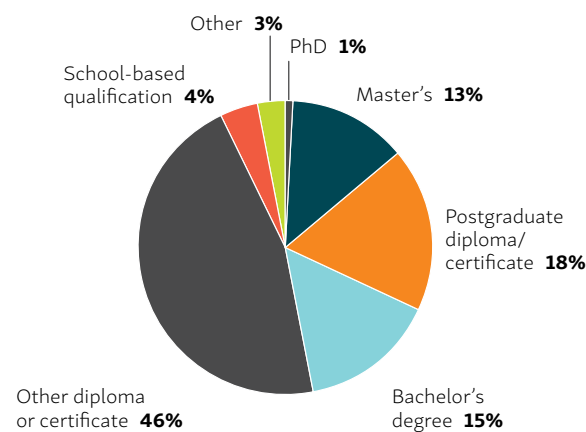
Respondents asked to tick all that apply so percentages add up to more than 100%.

Qualifications

Highest qualification in a H&S discipline

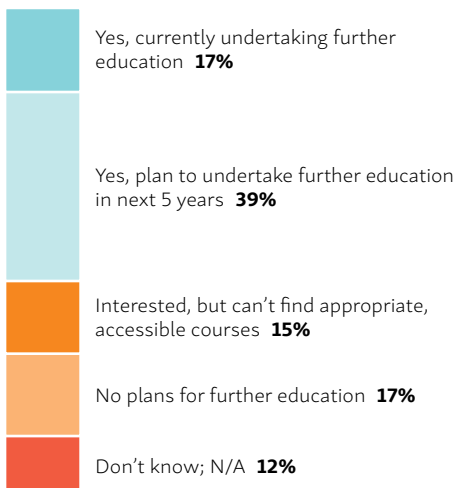


Highest academic qualification in any field

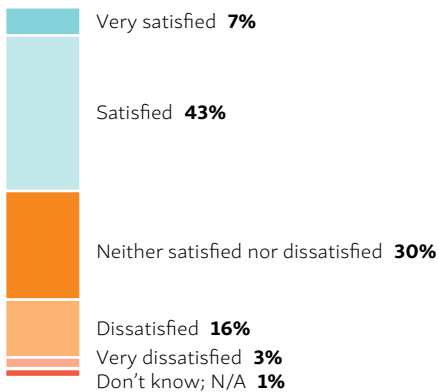


Continuing education, professional development and mentoring

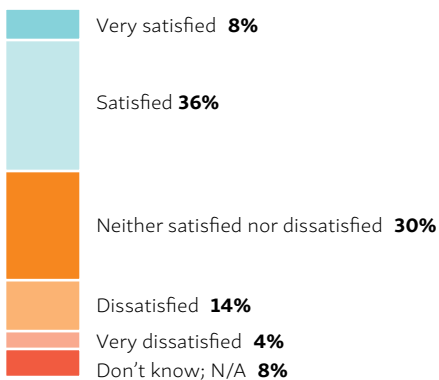
Plans to undertake further H&S related education



Satisfaction with access to CPD in H&S

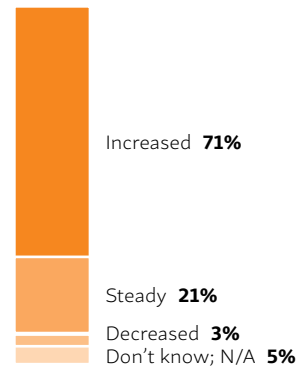


Satisfaction with access to career mentoring in H&S

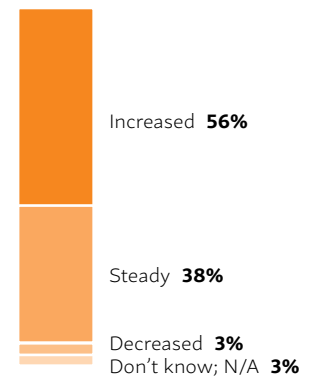


Demand for services

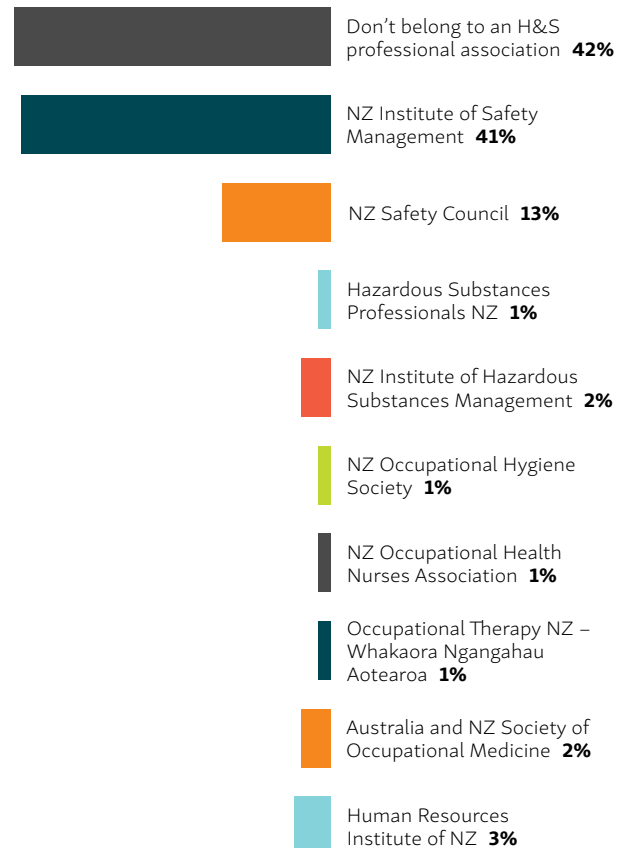
How demand has changed in the last 3 years



How demand is expected to change in the next 3 years



Membership of H&S professional associations



Respondents asked to tick all that apply so percentages add up to more than 100%.

About this report

Methodology

This report is based on research carried out by HASANZ during January-June 2019 which built on previous work undertaken by HASANZ, professional associations, WorkSafe, academic institutions and consultancies. A study of capacity and capability issues for the occupational hygiene workforce undertaken by WorkSafe in 2018 provided a broad template for the project's approach.

Primary research took place during February-May 2019. Work on individual disciplines had two main components. First, desktop research was undertaken to gather published information on scope, roles, competency frameworks and professional regulation for each discipline. This included international comparisons with other jurisdictions similar to New Zealand.

Second, interviews were undertaken with two to four key contacts from each profession to capture disciplinary perspectives and insights on scope, roles, learning pathways, opportunities and challenges. Draft reports for each discipline were developed and reviewed by the key contacts.

During March-April 2019, an online survey to obtain a range of workforce information was circulated through professional associations and various informal networks. It received a total of 248 valid responses, of which 76% were from health and safety generalists, and most others from associated professions (occupational medicine, engineering, human resources, management). Information on the other disciplines covered in this report was gathered through separate surveys:

- » As part of the project, HASANZ and HSPNZ collaborated on a survey of hazardous substances compliance certifiers (*50 responses*).
- » HFESNZ also undertook a membership survey based on the format of the HASANZ survey (*19 responses*).
- » In 2018, NZOHS undertook a workforce survey of its members (*31 responses*).
- » NZOHNA also undertook a membership survey in 2018 (*155 responses*).
- » Workforce surveys covering the occupational therapy and physiotherapy disciplines were undertaken in 2017 and 2018 respectively as part of projects commissioned by the professional registering authorities.

Previous surveys that also provided background information for the report included:

- » A survey of health and safety professionals undertaken by HASANZ and PwC in 2017.
- » The Government Health and Safety Lead workforce survey undertaken in 2018.
- » Workforce/remuneration surveys undertaken by the Safesearch consultancy and *Safeguard* magazine.

Workforce supply and demand estimates

MartinJenkins was commissioned to estimate the current supply of, and future demand for, the seven health and safety disciplines covered by this report. The primary sources for supply information were the membership lists of professional associations and the workforce information held by the registering authorities for the three registered health professions (occupational health nursing, occupational therapy and occupational health physiotherapy). Data on the number of nurses working in occupational health was obtained from the registering authority, but for occupational therapy and physiotherapy this had to be estimated from survey responses. MartinJenkins also generated estimates of the number of people working in non-regulated disciplines who do not belong to professional associations.

To estimate future demand, MartinJenkins used MBIE's projections of employment growth in key sectors identified based on ACC injury data and existing employment reported by health and safety professionals. Projected growth in these sectors (1.5% per annum) was similar to overall projected employment growth (1.6%). MartinJenkins estimated an additional 2.3% per annum growth in workforce demand based on (a) a significant existing shortfall of hazardous substances professionals and (b) a need to increase the ratio of health and safety professionals to workers. The overall projected demand growth of 3.8% per annum is indicative only and requires further, discipline-specific analysis, as discussed in *Findings and recommendations 4: Workforce supply and demand* (p. 28).

Stocktake of networks and groups

Based on surveys, and discussions with members of the HASANZ associations and other parties, we identified a large number of formal and informal groups that provide a community of practice for people working in health and safety. Representatives from each of the groups were interviewed to understand their role, membership and activities.

These groups typically play a role in connecting the health and safety workforce to businesses in their local areas. They also connect members of the workforce to each other, including people working in complementary health and safety disciplines. They provide an important mechanism for information sharing and can help those running harm prevention programmes to pass on information to businesses.

Review by governance group

Project findings and draft versions of this report were reviewed at several stages by the project governance group, which included representatives of the seven disciplines covered by the report, as well as representation from WorkSafe. Feedback from the governance group was incorporated into the report by the project team.

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Glossary

ACC	Accident Compensation Corporation
AIHS	Australian Institute of Health and Safety
AIOH	Australian Institute of Occupational Hygiene
CPD	continuing professional development
CREE	Centre for the Registration of European Ergonomists
DHB	District Health Board
FTE	full time equivalent
HASANZ	Health and Safety Association of New Zealand
HFE	human factors/ergonomics
HFESNZ	Human Factors and Ergonomics Society of New Zealand
HSPNZ	Hazardous Substances Professionals New Zealand
H&S	health and safety
INSHPO	International Network of Safety and Health Professional Organisations
IOHA	International Occupational Hygiene Association
IOSH	Institute of Occupational Safety and Health
NZIHSM	New Zealand Institute of Hazardous Substances Management
NZISM	New Zealand Institute of Safety Management
NZOHNA	New Zealand Occupational Health Nurses Association
NZOHS	New Zealand Occupational Hygiene Society
NZQA	New Zealand Qualifications Authority
NZSC	New Zealand Safety Council
OHTA	Occupational Hygiene Training Association
OTBNZ	Occupational Therapy Board of New Zealand
OTNZ-WNA	Occupational Therapy New Zealand-Whakaora Ngangahau Aotearoa
PBNZ	Physiotherapy Board of New Zealand
PNZ	Physiotherapy New Zealand
RPL	Recognition of Prior Learning

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