

2018

Ambulance and Paramedic

INDUSTRY REFERENCE COMMITTEE
INDUSTRY SKILLS FORECAST



SKILLSIQ

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Skills Forecast

Name of IRC:

Ambulance and
Paramedic

Name of SSO:

SkillsIQ Limited

About SkillsIQ:

SkillsIQ supports 18 Industry Reference Committees (IRCs) representing diverse 'people-facing' sectors. These sectors provide services to people in a variety of contexts such as customer, patient or client. The IRCs are collectively responsible for overseeing the development and review of training package products, including qualifications, serving the skills needs of sectors comprising almost 50% of the Australian workforce.

Our qualifications deliver skilled people that are valued and make a difference to others.

- Cross Sector Skills Committee, February 2018



Executive Summary

The training package products overseen by the Ambulance and Paramedic Industry Reference Committee (IRC) support a wide range of roles across the community which deliver fundamental pre-hospital and out-of-hospital health care services. Demand for these services spans a number of sectors, including health, community services, defence, education, arts and entertainment, mining, and manufacturing. As a result, these training package products are unique in their applicability across multiple industries and businesses.

In practice, the workforce is distributed across both the public sector and private sector enterprises. Historically, services such as patient transport, first response and life support service work have been provided by state and territory governments via state ambulance services. However, there has been a gradual split in the delivery of these function areas, with some formerly ambulance-specific services now being outsourced by governments to non-ambulance service providers.

The National Schedule details the training package update and development work commissioned by the Australian Industry and Skills Committee (AISC). The National Schedule is informed by this Industry Skills Forecast, which outlines the proposed timing for the update of existing training package products. This Forecast has been compiled using a number of information sources, including academic literature, statistical data, IRC member input and expertise, feedback received via public consultation, and an industry analysis of both new and emerging workforce skills needs overseen by the Ambulance and Paramedic IRC.

The sector is currently experiencing several challenges and opportunities which are impacting workforce skill requirements. These include:

- **Regulation and Registration** - A recent and significant regulatory change in the sector has been revision to the *Health Practitioners Regulation National Law Act 2009* (with equivalent state and territory adaptations) ('the National Law'), involving a greater restriction on the use of the term 'Paramedic'. As a result, there will now be a requirement for national registration of

paramedics as part of the National Registration and Accreditation Scheme ('the National Scheme'). The outcomes of the consultation regarding qualification requirements for registration expected later in 2018 will impact the role of VET qualifications in supporting individuals moving into paramedicine and ambulance-related positions.

- **Rural and Remote Communities and Environments** – Ensuring an adequate supply of skilled staff is paramount in rural and remote environments.
- **Privatisation** - As previously noted, the inclusion of paramedics in the National Registration and Accreditation Scheme under the Health Practitioner Regulation National Law will see a significant regulatory change for the sector. This may also have a further flow-on effect of growing the demand for privately operated services with a corresponding increase in demand for these training package products in both direct and/or supporting roles.
- **Technology** - Technological advancements within the ambulance and paramedic sector have meant that the skills needs of the workforce have been shifting to adapt to the digitalisation of functions.
- **Workforce Issues** – These include occupational violence, mental health, and wellbeing and resilience.

It is proposed that the following seven qualifications relating to ambulance and paramedic job roles be updated in the 2018–2019 year:

- HLT21015 Certificate II in Medical Service First Response
- HLT31015 Certificate III in Ambulance Communications (Call-taking)
- HLT31115 Certificate III in Non-Emergency Patient Transport
- HLT31215 Certificate III in Basic Health Care
- HLT41015 Certificate IV in Ambulance Communications (Dispatch)
- HLT41115 Certificate IV in Health Care
- HLT51015 Diploma of Paramedical Science.

This will ensure that training package products meet the future skills needs of the ambulance and paramedic sector.





Sector Overview

The training package products overseen by the Ambulance and Paramedic IRC support a wide range of roles across the community which deliver fundamental **pre-hospital and out-of-hospital health care services**. Demand for these services spans a number of sectors, including health, community services, defence, education, arts and entertainment, mining, and manufacturing. As a result, these training package products are unique in their applicability across multiple industries and businesses.

Pre-hospital/out-of-hospital health care services can involve emergency and non-emergency situations, playing a pivotal role in injury/illness prevention and health promotion,¹ as individuals in such roles are commonly the first to interact with a patient and provide primary care and/or support. This primary care can in some cases determine the long-term outcome of a patient and successfully minimise treatment needs and, consequently, demand for hospital and health provider facilities.

Traditionally, the roles and services related to pre-hospital/out-of-hospital care have been referred to under the wider

MEDICAL DICTIONARY DEFINITIONS

Pre-hospital: Any initial medical care given to an ill or injured patient by a paramedic or other person before the patient reaches the hospital emergency department.

Out-of-hospital: A term used in emergency medicine to mean “in the field”, “in the community”, “at the patient’s home or workplace”, or “pre-hospital”. Assessments performed and treatments given in an out-of-hospital context often stabilise a patient or initiate critically needed care.

title of Ambulance Services, with ambulance officers and paramedics as the main occupational category² used to report workforce-related information. The functions and work environments supported by these training package products, however, are significantly more varied and go beyond the remit of merely ambulance services. Figure 1 outlines examples of the breadth of skills, functions and role types which these qualifications currently support.

Figure 1: Examples of functions and roles supported by the various training package products.

CERTIFICATE II	CERTIFICATE III	CERTIFICATE IV	DIPLOMA
Medical Service First Response Example of functions: <ul style="list-style-type: none"> Check physical health status (prior to health intervention) Provide First Aid Carry out routine tasks using medical terminology Understand state/territory WHS legislation, codes or practice and industry standards Example of roles: <ul style="list-style-type: none"> First Medical Response Worker / First Responder Volunteer (providing initial care at an event, palliative care service, direct client care service, etc) 	Ambulance Communications (Call-taking) Non-Emergency Patient Transport Basic Health Care Example of functions: <ul style="list-style-type: none"> Respond to requests for ambulance services Make initial incident and patient assessment Plan pre-hospital/out-of-hospital patient care Provide basic life support Transport non-emergency patient and related tasks Example of roles: <ul style="list-style-type: none"> Call-taker Non-emergency Patient Transport Officer Advanced Responder in Health Care Medical Assistant 	Ambulance Communications (Dispatch) Health Care Example of functions: <ul style="list-style-type: none"> Respond to routine and emergency incident calls and enquiries Quickly determine call authenticity, potential danger of caller and location Communicate with patient and health professionals in complex situations Use radio networks Example of roles <ul style="list-style-type: none"> Emergency Medical Dispatch Support Officer (EMDSO) Ambulance Dispatch Officer Ambulance Officer Patient Transport Officer Basic Life Support Medic Industrial Medics 	Paramedical Science Example of functions: <ul style="list-style-type: none"> Patient assessment (prior to health intervention) Assess environment and communicate with all involved, including other services and networks if necessary Transport patient under non-emergency and emergency conditions Provide mentoring to staff delivering clinical care Example of roles <ul style="list-style-type: none"> Paramedic Assistant Emergency Medical Technician (EMT) Ambulance Officer Clinical Mentor

Source: Training.gov.au

Note: Descriptions of functions and roles have been extracted from qualification specifications published at training.gov.au

Figure 2: VET training package placement with First Aid and Higher Education learning



These training package products support the workforce to meet the complexity of primary health care service demands in designated roles (as outlined in Figure 1). However, the skills areas are also **embedded in broader role types** both within and outside the health services sector. Individuals in roles within the community and social services sector, or whose roles involve Workplace Health and Safety (WHS), or who are ‘in the field’ (e.g. mine workers), can be required to be equipped with key skills to conduct basic health checks and assessments in the event of unexpected incidents. The settings can range from mines and manufacturing sites, and agricultural and rural properties, to those where events and cultural activities are held. In regional and rural communities, the qualifications are especially important in preparing the workforce to deal with the multi-disciplinary demands they may face as a result of the remoteness of their situation.

These training package products also act as an important catalyst to support individuals’ progress into more advanced learning options and career opportunities. The qualifications may **provide learners with pathways** into higher education studies for paramedic roles which require degree-level qualifications (see Figure 2). The qualifications are also tiered to support individuals moving into other VET-qualified positions such as ambulance officers. The recognition of qualifications across pathways can differ across states and territories. However, some examples are as follows:

The paramedic workforce landscape is currently undergoing significant changes, with new national registration requirements due to be implemented in late 2018. More information on this is available in this report in the section titled *Challenges and Opportunities*. The role of these training package products will need to evolve accordingly to continue providing adequate pathways in the new regulated environment.

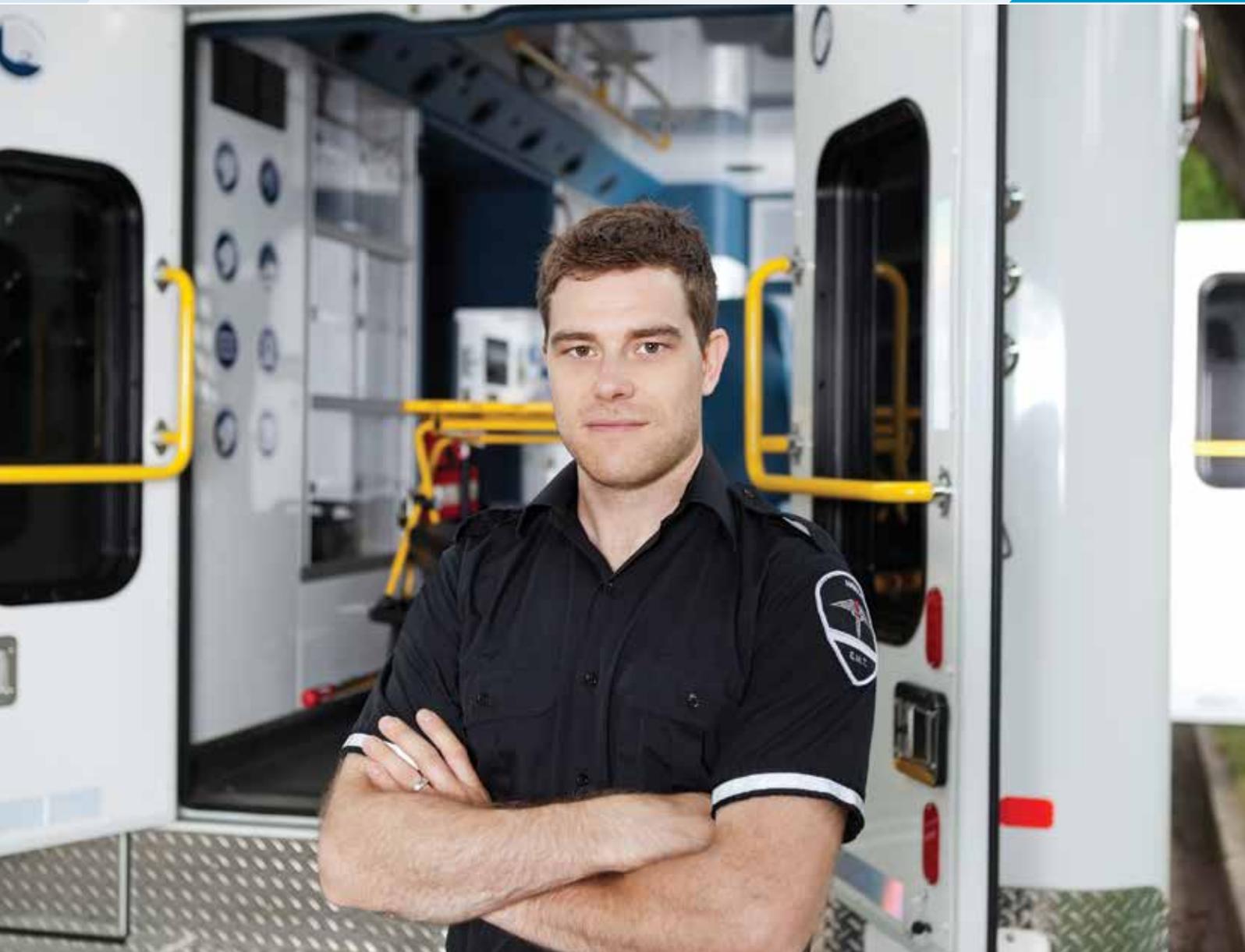
In practice, the workforce is **distributed across both the public sector and private sector enterprises**. Historically, services such as patient transport, first response and life support service work have been provided by state and territory governments via state ambulance services. However, there has been a gradual split in the delivery of these function areas, with some formerly ambulance-specific services now being outsourced by governments to non-ambulance service providers. For example, in New South Wales, the NSW Patient Transport Services (formerly known as Non-Emergency Patient Transport or NEPT) uses HealthShare NSW to deliver the patient transport function. State and territory governments are also increasingly outsourcing the delivery of these services to private enterprise and today a large proportion of the workforce supported by these training package products is in the private sector.

In an attempt to measure the potential size of the sector to which these training package products cater,



Source: Training.gov.au

Note: *The Advanced Paramedical Science skill set provides a pathway for Paramedical Science Emergency Workers to articulate into higher education. It is suitable for individuals who hold the Diploma of Paramedical Science.



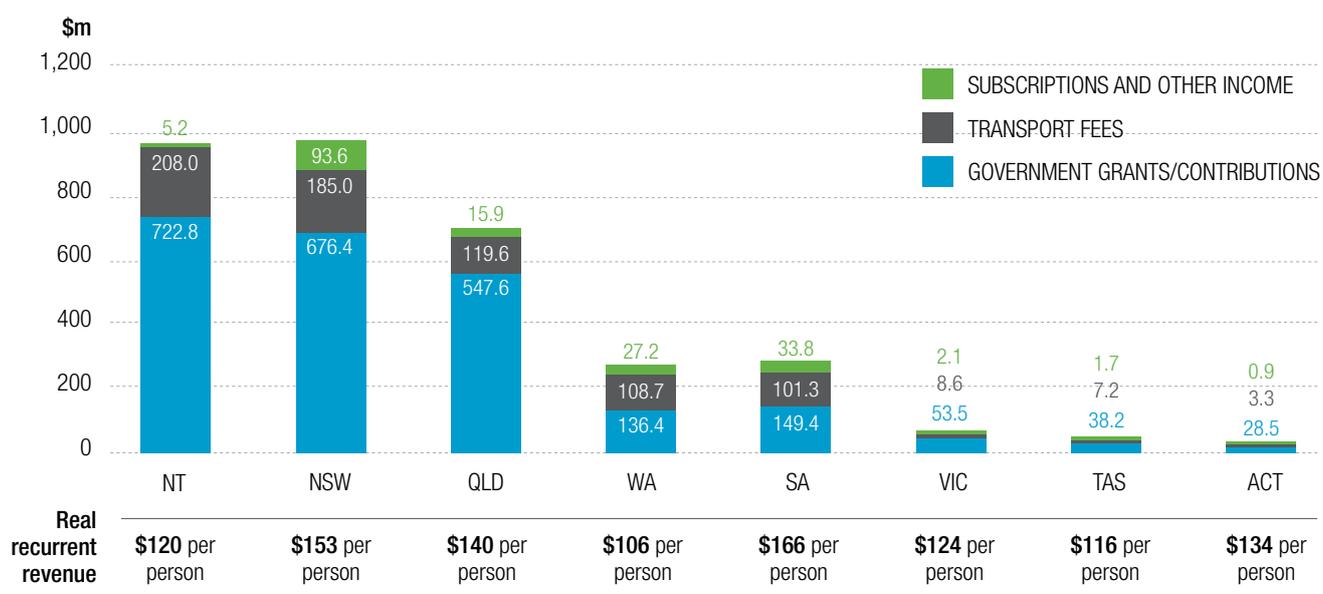
the Productivity Commission's Report on Ambulance Services has been used as it defines the service areas, as including:³

- emergency and non emergency pre hospital and out of hospital patient care and transport
- inter hospital patient transport, including the movement of critical patients
- specialised rescue services
- the ambulance component of multi casualty events
- the community's capacity to respond to emergencies.

Total national revenue from ambulance services was \$3.3 billion in 2016–17, with revenue sources comprised of government grants and contributions, transport fees,

subscriptions and other income streams. Funding models differ across jurisdictions. However, government grants and contributions make up the bulk of ambulance service organisations' funding, representing a national average of 71.8%. Victoria registered the highest revenue amount (of \$954.9 million) followed by New South Wales (\$936.0 million) and Queensland (\$683.1 million) (see Figure 3). South Australia noted the highest real recurrent revenue per person of \$166 and Western Australia the lowest (of \$106 per person).

Figure 3 Major sources of ambulance service organisations' revenue (2016–2017 dollars) \$m



Source: Report on Government Services 2018 – Ambulance Services (Part E, Chapter 11, Table 11A.1).

Note: NSW has a subscription scheme but funds are deposited to the consolidated revenue of the NSW Treasury. ACT revenue reported reflects direct revenue to the ACT Ambulance Service. No attributions have been made for the umbrella department or supporting services.

The scope of activities covered by the ambulance services workforce is vast, and the latest figures show that in 2016–17:

- 3.5 million incidents were reported
- 3.3 million patients were assessed, treated or transported by ambulance service organisations
- 4.4 million responses involved an ambulance being sent to an incident
- 1,761 first responder locations involved the use of an ambulance
- 3,671 ambulance general transport and patient transport vehicles were used.

The ambulance services' workforce size is 16,980 (full-time equivalent [FTE] salaried personnel) with 13,735 (80.9%) in operative ambulance roles. Further information regarding workforce trends and estimates is provided in the section of this document titled Employment and Skills Outlook.

With the demand for health services increasing, so the attendant demand for ancillary services⁴ supporting the delivery of pre-hospital/out-of-hospital health care is also increasing. These training package products are integral to ensuring a suitably skilled workforce is available to meet the increasing emergency and non-emergency health care demands of Australian residents.

Nationally Recognised Ambulance and Paramedic Qualifications - Current at June 2018

The VET qualifications that cater to this sector include:

- HLT21015 Certificate II in Medical Service First Response
- HLT31015 Certificate III in Ambulance Communications (Call-taking)
- HLT31115 Certificate III in Non-Emergency Patient Transport



- HLT31215 Certificate III in Basic Health Care
- HLT41015 Certificate IV in Ambulance Communications (Dispatch)
- HLT41115 Certificate IV in Health Care
- HLT51015 Diploma of Paramedical Science.

Registered Training Organisation Scope of Registration

Table 1 indicates the number of Registered Training Organisations (RTOs) with ambulance and paramedic qualifications on scope. This data is current as at June 2018, per the listing on the National Register of VET (www.training.gov.au).

Table 1: Number of RTOs by nationally recognised qualifications on scope – Ambulance and Paramedic Training Package Products

Qualification Code	Qualification Title	No. of RTOs with Qualification on Scope
HLT21015	Certificate II in Medical Service First Response	22
HLT31015	Certificate III in Ambulance Communications (Call-taking)	6
HLT31115	Certificate III in Non-Emergency Patient Transport	16
HLT31215	Certificate III in Basic Health Care	13
HLT41015	Certificate IV in Ambulance Communications (Dispatch)	7
HLT41115	Certificate IV in Health Care	18
HLT51015	Diploma of Paramedical Science	16

Source: Training.gov.au. RTOs approved to deliver this qualification. Accessed 25 June 2018.

Note: Although an RTO may have a qualification on scope for delivery, it may not be delivering any nationally recognised training for that qualification. As a result, the count may not be a complete reflection of the extent of delivery.

Qualification Enrolments

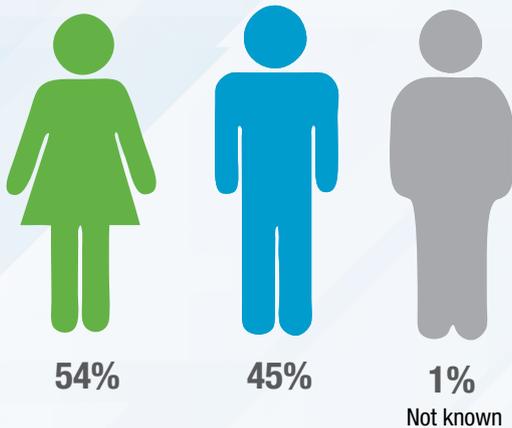
In 2016, there were just under 3,800 enrolments across all VET qualifications catered to by the Ambulance and Paramedic Training Package products. The most popular qualifications in 2016 were the *Certificate II in Emergency Medical Service First Response*, now superseded (representing just under 32% of all Ambulance and Paramedic Training Package qualifications and equivalent to 1,200 enrolments), and the *Certificate IV in Health Care (Ambulance)*, also now superseded (representing 24% and equivalent to 900 enrolments).

An overview of key metrics for the Ambulance and Paramedic Training Package enrolments for 2016 is on the following page, followed by a breakdown of enrolments for individual qualifications (see Table 2).

2016 ENROLMENT SNAPSHOT

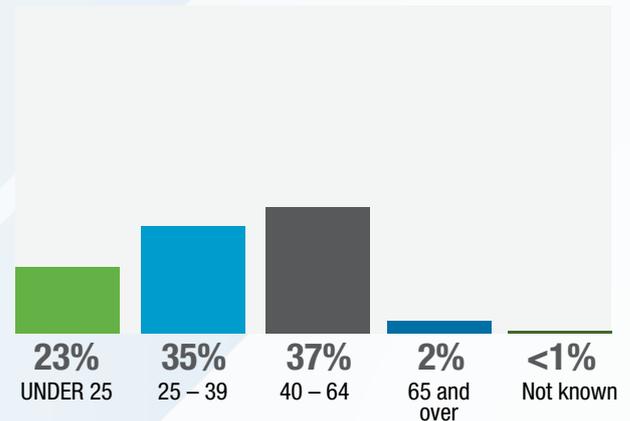
AMBULANCE AND PARAMEDIC TRAINING PACKAGE PRODUCTS

GENDER

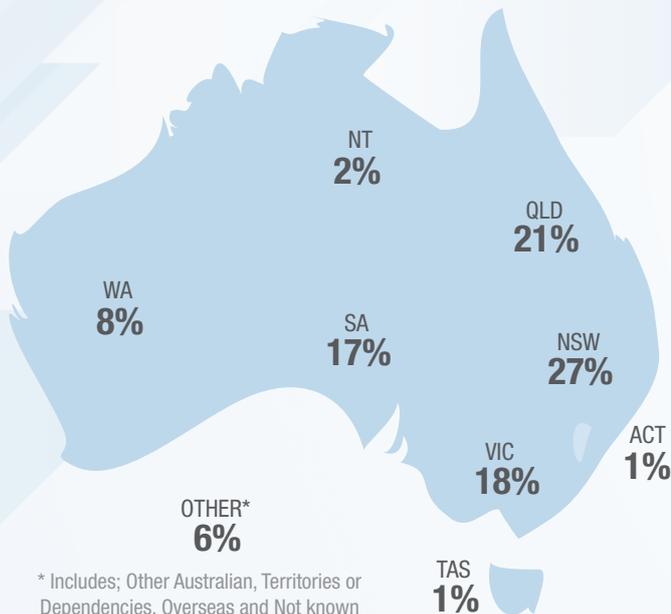


AGE

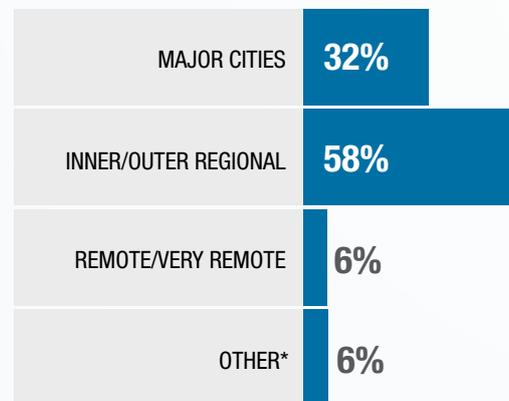
Percentage Years of age



STATE/TERRITORY OF RESIDENCE



STUDENT REMOTENESS REGION (2011 ARIA+)



* Includes; Outside Australia and Not known

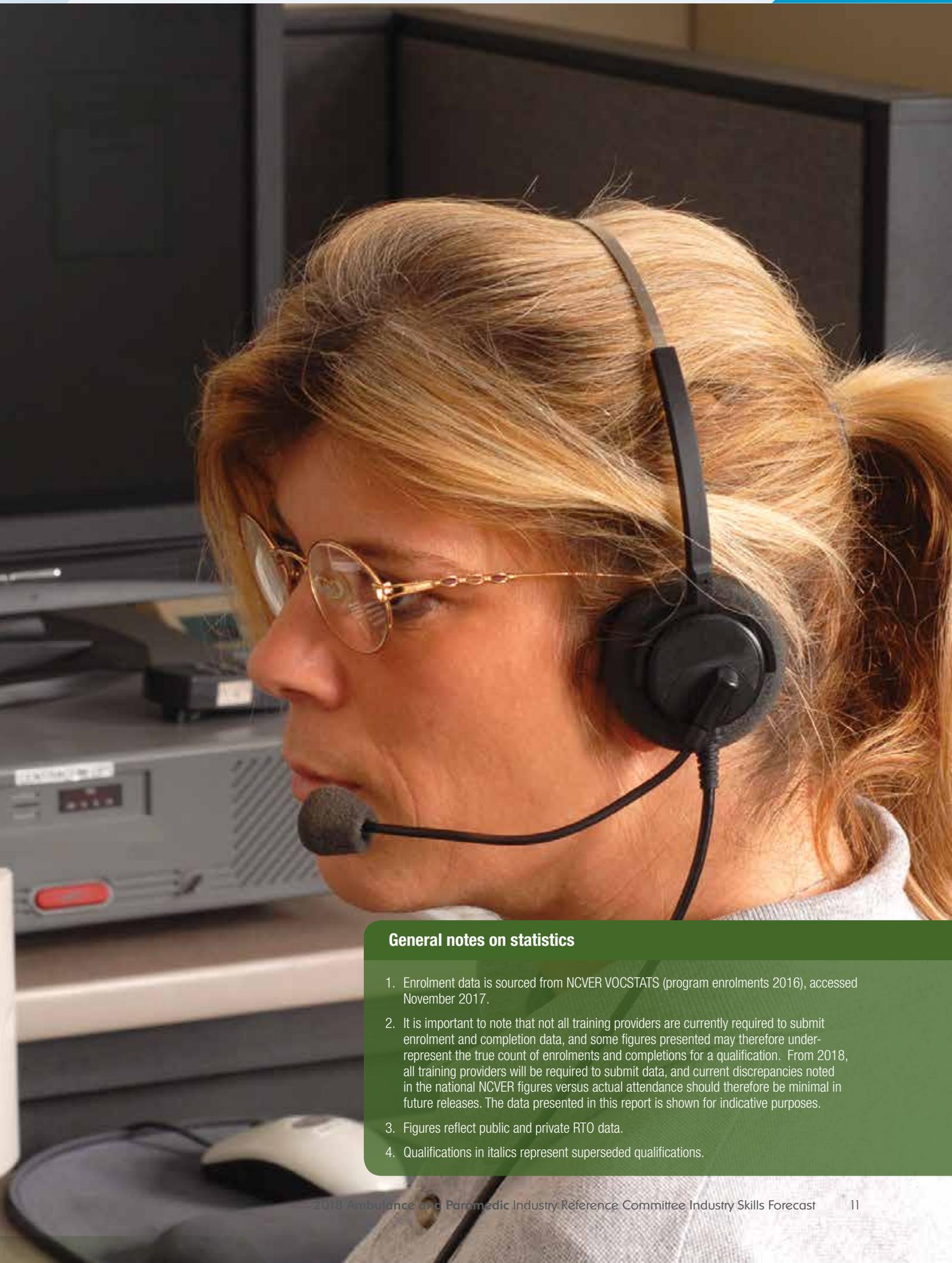
Source: NCVER VOCSTATS (Program enrolments 2016 by various breakdowns)

Base count n = 3,800

Note: Please refer to the previous section for a list of qualifications that are included in the enrolment summary. Due to the way enrolment data is currently registered, superseded qualifications are included in the total enrolment count to provide a more representative picture of volume. The superseded qualifications include:

- HLT21112 - Certificate II in Emergency Medical Service First Response
- HLT31912 - Certificate III in Ambulance Communications (Call-taking)
- HLT30212 - Certificate III in Non-Emergency Client Transport
- HLT33107 - Certificate III in Basic Health Care
- HLT33112 - Certificate III in Basic Health Care

- HLT41112 - Certificate IV in Ambulance Communications
- HLT41012 - Certificate IV in Health Care (Ambulance)
- HLT50412 - Diploma of Paramedical Science (Ambulance)
- HLTFA412A Apply advanced First Aid (single unit of competency)



General notes on statistics

1. Enrolment data is sourced from NCVET VOCSTATS (program enrolments 2016), accessed November 2017.
2. It is important to note that not all training providers are currently required to submit enrolment and completion data, and some figures presented may therefore under-represent the true count of enrolments and completions for a qualification. From 2018, all training providers will be required to submit data, and current discrepancies noted in the national NCVET figures versus actual attendance should therefore be minimal in future releases. The data presented in this report is shown for indicative purposes.
3. Figures reflect public and private RTO data.
4. Qualifications in *italics* represent superseded qualifications.

Table 2: Total number of enrolments (Total VET Activity [TVA]) by nationally recognised qualifications on scope – Ambulance and Paramedic Training Package Products, 2016

QUALIFICATION	2016 ENROLMENTS
HLT21015 Certificate II in Medical Service First Response	80
<i>HLT21112 - Certificate II in Emergency Medical Service First Response (Superseded)</i>	<i>1,203</i>
HLT31015 Certificate III in Ambulance Communication (Call-taking)	33
<i>HLT31912 - Certificate III in Ambulance Communications (Call-taking) (Superseded)</i>	<i>59</i>
HLT31115 Certificate III in Non-Emergency Patient Transport	2
<i>HLT30212 - Certificate III in Non-Emergency Client Transport (Superseded)</i>	<i>222</i>
HLT31215 Certificate III in Basic Health Care	34
<i>HLT33112 - Certificate III in Basic Health Care (Superseded)</i>	<i>241</i>
<i>HLT33107 - Certificate III in Basic Health Care (Superseded)</i>	<i>371</i>
HLT41015 Certificate IV in Ambulance Communications (Dispatch)	5
<i>HLT41112 - Certificate IV in Ambulance Communications (Superseded)</i>	<i>50</i>
HLT41115 Certificate IV in Health Care	100
<i>HLT41012 - Certificate IV in Health Care (Ambulance) (Superseded)</i>	<i>902</i>
HLT51015 Diploma of Paramedical Science	56
<i>HLT50412 - Diploma of Paramedical Science (Ambulance) (Superseded)</i>	<i>388</i>

Source: NCVET VOCSTATS, accessed November 2017.

Note: The number of enrolments in these qualifications reflect the specialised nature of jobs in this sector. Due to extended implementation and transition periods for qualifications, enrolment data may be registered under superseded qualification codes (listed in italics).

In addition to these qualifications, the skill set HLTSS00063 Advanced Paramedical Science offers a pathway for paramedical science emergency workers to move into higher education. In 2016, this skill set registered 13 enrolments, and comprised the following units of competency:

- HLTAMB004 Conduct advanced clinical assessment
- HLTAMB009 Deliver intensive clinical care
- HLTHPS008 Provide clinical mentoring in the work environment.

Businesses Involved

As stated earlier, the workforce is distributed across both **public and private sector enterprises, and multiple industries**. Pre-hospital/out-of-hospital care services can be delivered by organisations which have on scope one or multiple health care services, and while they represent the majority of providers who are the users of these

training package products, qualified individuals will also be employed in non-health-related organisations, such as mining or manufacturing companies. A breakdown of the key organisation types who use these qualifications include:

- **National/state/territory governments.** These are the main funders of ambulance services and Non-Emergency Patient Transport (NEPT), as well as employers of personnel for the Department of Defence.
- **Out-of-hospital service providers.** These are the primary providers of ambulance services, although in most states and territories the use of the term Ambulance Service is regulated by legislation. The latest count of Australian businesses provided by the Australian Bureau of Statistics (ABS)⁵ shows that there are 49 operating businesses providing emergency and urgent response services across the country. Emergency and urgent response providers are primarily dominated by large government-funded organisations,



typically state- or territory-led (e.g. NSW Ambulance, Ambulance Victoria, Queensland Ambulance Services, etc.). However, over time an increasingly large volume of previously state-based ambulance service functions, such as events, medical services, and occupational and patient transport, has been transferred to non-state-based (i.e. private) ambulance service providers.

- **Non-Emergency Patient Transport (NEPT) providers.** This function has been traditionally delivered by state-based ambulance and health service areas. However, as indicated earlier, the sector's trend has involved outsourcing non-emergency functions and transport to private providers. Today a majority of businesses involved in non-emergency responses are private or not-for-profit operators.⁶ Examples of operators in this space include Paramedical Services, St John Ambulance and the Royal Flying Doctor Service (RFDS).
- **Medical and Allied Health Care Service providers.** These can include a breadth of organisation types, including:
 - Hospitals
 - Private Medical Centres
 - Community Health Centres
 - Mental Health Centres
 - Aged Care Homes
 - Rehabilitation Centres.

The Australian Bureau of Statistics' latest national count of businesses showed that in 2016 there were 1,068 hospitals (including psychiatric hospitals), 875 businesses involved in Other Health Services and 19,500 businesses across Australia providing Other Allied Health Services.⁷

Overall, the breadth and type of potential employing organisations is growing significantly as businesses involved in community and personal support services, as well as those implementing Workplace Health and Safety practices in the workplace and the Defence Force, are included within the sector.

Stakeholders

National Peak Bodies and Key Industry Players

The list below represents a range of organisations that perform a variety of key roles in this sector. These organisations and their networks are well placed to offer

industry insights at the time of training package product review. Industry engagement will include a broad and inclusive range of stakeholders beyond those included in this list, as relevant. Engagement and consultation activities will include a broad range of industry stakeholders beyond those included in this list.

- **Government departments and agencies**
- **Peak and industry associations**
 - The Council of Ambulance Authorities
 - Paramedics Australasia
 - Australian and New Zealand College of Paramedicine
- **Employee associations**
 - Health Services Union (TAS and NSW)
 - United Voice (VIC, QLD, NT and WA)
 - National Council of Ambulance Unions (Australia)
 - Ambulance Employees Association (SA)
 - Transport Workers' Union
 - Australian Paramedics Association
 - Health and Community Services Union
- **State and territory service providers**
 - Australian Capital Territory Ambulance Service
 - Ambulance Tasmania
 - Ambulance Victoria
 - NSW Ambulance
 - Queensland Ambulance Service
 - SA Ambulance Service
 - St John Ambulance Northern Territory
 - St John Ambulance Western Australia
- **Not-for-profit organisations**
- **Private employers**
- **Department of Defence**
- **Public and private Registered Training Organisations (RTOs)**

Challenges and Opportunities

Regulation and Registration

The pre-hospital/out-of-hospital health care services sector, including ambulance and paramedic services, is governed by a number of national and state- and territory-based laws and regulations, each outlining lawful instructions regarding the conduct of employees and management, service delivery and performance, and registration and qualification requirements. The range of legislative instruments include the *Health Practitioners Regulation National Law Act 2009* (with equivalent state and territory adaptations) ('the National Law'), the *Ambulance Services Act* and the *Ambulance Services Regulations* (with adaptations of each also made by different states and territories).

A recent and significant regulatory change for the sector has been the **national registration of paramedics** as part of the National Registration and Accreditation Scheme ('the National Scheme'). The *Health Practitioner Regulation National Law and Other Legislation Amendment Bill 2017* which prescribes the registration requirements was first passed in September 2017 by the Queensland Parliament, and applies in all states and territories except Western Australia, where an equivalent Bill, the *Health Practitioner Regulation National Law (WA) Amendment Bill (2017)* was passed outlining registration requirements.⁸ Consequently, the Paramedicine Board of Australia ('the Board') was established in October 2017 and, together with the Australian Health Practitioners Regulation Agency (AHPRA), has been tasked with developing and establishing registration standards, codes and guidelines. Registrations are expected to open in mid-2018, with national regulation expected to take effect in late 2018.

The Board is in the process of reviewing qualification requirements to be approved for registration purposes

and has currently identified three main pathways for general registration:

- **Pathway 1** – paramedics hold an approved qualification or otherwise qualify for registration, because, for example, they hold a qualification that is equivalent to, or based on, similar competencies required to gain an approved qualification
- **Pathway 2** – 'grandparenting' arrangements (which will be available for people to submit an application for general registration within three years from the 'participation day' (the date on which registration for paramedics will commence).
- **Pathway 3** – individuals hold a *Diploma of Paramedical Science* issued by NSW Ambulance.

The aim of the National Registration for Paramedics is to:

- Protect the public by establishing five mandated registration standards (i.e. criminal history, English language skills, continuing professional development, recency of practice and professional indemnity insurance arrangements)
- Protect the title 'Paramedic' under the National Law
- Enhance national mobility for paramedics
- Make paramedicine a registered health profession which would come under the same national regulation as 15 other professions
- Establish approved programs of study that provide qualifications for registration as a paramedic.

Source: Paramedicine Board of Australia

The outcomes of the consultation regarding qualification requirements for registration will impact the role of VET qualifications in supporting individuals moving into paramedicine and ambulance-related positions. Mapping VET qualifications across registration requirements and, more widely, across the post-registration occupational environment will be important in order to gain an understanding of the supportive ways in which the training package products can contribute to facilitating career pathways.

The IRC will continue to monitor developments announced by the Board to ensure that

outcomes are considered in the context of the individual training package products.

Population Ageing and Growth

Australia, like most developed nations, is experiencing a long-term ageing of its population. The Australian Government's Intergenerational Report (IGR) shows that both the number and proportion of Australians aged



65–84 and 85 years and over are projected to grow substantially. In 2015, approximately 3 million people, or 13% of the population, were aged 65–84, and 500,000 people, or 2% of the population, were aged 85 years and over.⁹ By 2054–55, the 65–84 year-old cohort is projected to be around 7 million people, or just under 18% of the population. The population 85 years and over is projected to be around two million people, or 5% of the population.¹⁰ Such substantial changes in the age of the population will certainly put increasing pressures on health services as the prevalence of chronic pain conditions rises. Ambulance services are among the many health services which are expected to significantly increase due to the growing ageing population and the related trends for senior Australians to continue living independently at home.¹¹

While Australia's senior population is growing steadily, so too is Australia's general population. Overall, the population grew by 1.6% during the year ended 30 June 2017.¹² Approximately 37% of this growth was due to natural increases while 63.2% was due to net overseas immigration. Based on medium-level growth assumptions, Australia's population is projected to increase to 41.5 million people in 2061 and 53.6 million in 2101.¹³

Demand for emergency and non-emergency health care services both in pre-hospital and out-of-hospital settings has been growing steadily, and the latest statistics show 3,241,275 patients were transported and/or treated by ambulance services in Australia in the twelve-month period¹⁴ from 2015–16 which represents an increase in patient numbers of just over 41,100 from the previous twelve-month period. With population trends of ageing and growth expected to continue steadily, managing the demand for pre-hospital and out-of-hospital services will be a priority, and will include the need for workforce planning to ensure staff volume and skills are in line with demand trends. In addition, the growth of the private sector providing first responder, patient transport and related emergency and non-emergency health services will also influence workforce needs for the sector, as skill and qualification requirements can differ from those required by state providers.

The Rise of Chronic Conditions

As mentioned earlier, an ageing population will mean that the prevalence of chronic conditions across the country will grow, and subsequently put additional pressures on health care services. The latest self-reported statistics (2014–15) indicate that one in every two Australians (50%) suffer from at least one chronic condition. 60% of the population aged over 65 years have two or more chronic conditions.

Chronic conditions can include:¹⁵

- Arthritis
- Asthma
- Back pain
- Cancer
- Cardiovascular disease
- Chronic obstructive pulmonary disease
- Diabetes
- Mental health conditions.

The Commonwealth Government's Department of Health has developed a *National Strategic Framework for Chronic Conditions (2017)* to provide guidance for the development and implementation of policies, strategies, actions and services to reduce the impact of chronic conditions in Australia. The Framework acknowledges that conditions may be triggered by common underlying factors and therefore focuses on prevention as well as the management of conditions. As health service providers review this Framework and work to develop suitable strategies and programs to address chronic conditions in their communities, staff in the range of roles supported by these training package products (i.e. first responders, patient transport officers, call takers and dispatchers, medic assistants, etc.) may require additional training to ensure they can conduct adequate assessments and provide advice on chronic conditions.

Occupational Violence

Workplace violence is prevalent across most industries, and first responders in an emergency, such as police, paramedics, emergency hospital staff, security officers and fire fighters, as well as other staff in the health and aged care sectors, are most likely to be exposed to violence in their roles.¹⁶ In South Australia alone, the staff of the ambulance



and paramedic services sector, which include ambulance officer and first responder roles, have been identified as most at risk compared to staff in other health sector roles.¹⁷ This is because they operate in high-risk unpredictable work environments involving providing care to people who are in distress, afraid, ill or incarcerated, and therefore the types of violence can range from physical assault to verbal and physical threats. Some key statistics relating to occupational violence across the country show that:

- In Australia, 92.2% of emergency nurses and doctors experienced alcohol-related physical aggression from patients in 2016.¹⁸
- In Victoria in 2015–16, paramedics were exposed to some form of violence or aggression in 5,000 emergency cases, which is equivalent to 13 cases per day.¹⁹
- In Queensland, 216 assaults were reported on ambulance officers between July 2015 and January 2016.²⁰

Over the years, the likelihood of being exposed to an assault as an emergency services worker has become a characteristic of the role and some triggers have been directly related to the rise in crystal methamphetamine ('ice') and alcohol-fuelled violence. For example, in New

South Wales, 22% and 15% of occupational violence-related incidents between 1 July and 13 December 2014 were related to alcohol and illicit substances respectively.²¹ Between 2010 and 2016 there was a 36% increase in regular ice users and the harms related to ice use have subsequently increased. Demands on health services have involved increases in the numbers of methamphetamine-related Helpline calls, drug and alcohol treatment episodes and hospital admissions for methamphetamine abuse, dependence and psychosis.²²

In an attempt to combat the growing issues of occupational violence in the sector, state and territory governments have implemented key campaigns and training initiatives. Some have involved educating the community, while others have concentrated on enhancing education and training programs to better equip the workforce to deal with potential threats of violence or injury. Examples include the following:

Campaigns

- SA Ambulance Service (SAAS) and SA Health – *Keep your hands off our Ambos!* - public awareness campaign.



- Queensland Ambulance Services (QAS) - *Zero Tolerance: No Excuse for Abuse* - public awareness campaign and Occupational Safety Training (OST) - violence prevention program to increase the safety of QAS paramedic providers in out-of-hospital operational environments.
- NSW Ambulance - *No Excuse for Triple Zero (000) Call Taker Abuse* - public awareness campaign to address abuse directed by the public to call takers
- Victoria Government - *Ice Action Plan* - a strategy which outlines investment to reduce the harm of ice use across Victoria through a review of regulations, law enforcement, prevention, education and treatment responses.
- Ambulance Tasmania - *Keep your hands off our Ambos!* - public awareness campaign targeting 20-29 year olds.

Education and Training

- Department of Health and Human Services (Victoria) - *Guide for violence and aggression training in Victorian health services*, which provides a suite of training principles for different staff tiers.
- Ambulance Victoria - Occupational violence education program which involves training to equip paramedics with the behavioural, tactical and communication skills to reduce their exposure to violence, using virtual reality technology.
- Queensland Ambulance Services (QAS) via the QAS Paramedic Safety Taskforce - Development of a new *Situational Awareness for Everyday Encounters (SAFE2)* program involving online and face-to-face practical modules to better support paramedics in identifying and de-escalating certain confronting situations.
- SA Ambulance Service (SAAS) - Operational safety program which includes training in scene assessment, tactical communication and conflict resolution, and techniques for managing scene safety, including evacuation, de-escalation and disengagement.
- Ambulance Tasmania with the Tasmanian Police - Occupational violence program delivered as Continual Professional Development (CPD) to all staff.

While raising community awareness has seen some positive trends in reducing incidents, occupational

violence is currently (and is forecasted to be) a significant ongoing consideration for the workforce. Workforce training is a fundamental component for addressing the issues, and training package products will therefore need to ensure they evolve to include key skills for assessing potential incidents of violence, and strategies to address them.

Mental Health

Mental illness affects many Australians. In Australia, over two million people in 2015-16 received Medicare-subsidised mental health-specific services. In 2014-15, \$8.5 billion was spent on mental health-related services and 7.8% of total health expenditure was spent on mental health-related services and programs.²³

Research conducted by the drug research centre Turning Point indicates that one in five emergency call-outs are linked to a mental health condition²⁴ and so, in this sector, mental health is a critical issue influencing occupational tasks and responsibilities. The increase in occupational violence faced by the health sector workforce as a result of dealing with individuals with mental illnesses means that staff need appropriate skills to address a range of conditions triggered as a result of the illnesses, including anxiety-related conditions, affective disorders and substance abuse.

Supporting the mental health of the workforce has also been an increasingly important issue which service providers are recognising. First responders to emergency situations and other health care workers are at risk of developing mental health conditions such as anxiety and depression due to the unpredictable and, at times, traumatic situations to which they are exposed. Figures show that in Victoria, suicide rates among paramedics are approximately four times higher than the average for other state jobs.²⁵ In response to the growing concerns in Victoria regarding the mental health of the workforce, Ambulance Victoria has partnered with beyondblue to deliver a \$1.2 million mental health training program for paramedics and managers in the sector. It involves two online components and a four-hour face-to-face workshop.²⁶ As mental health issues grow in prevalence across both the general population and the ambulance

and paramedic workforce, workforce mental health strategies will become increasingly important, and these will include the provision of relevant training to ensure individuals are provided with appropriate mechanisms to deal with the difficulties they face in their work.

Wellbeing and Resilience of the Workforce (Public and Private Sector)

The nature of pre-hospital/out-of-hospital health care, especially when responding to emergency situations, comes with a range of everyday stressors such as long hours on shift work schedules, possibly heavy workloads and difficult shifts. In addition to these common workplace risks the staff in ambulance service-related roles, who are often the first to respond to the front line of an emergency, or communicate with distressed patients, have an increased risk of being repeatedly exposed to traumatic events such as death or violence,²⁷ and these can trigger mental health illnesses as discussed earlier. This is particularly relevant to the workforce in roles such as first responder, call-takers and dispatchers, and patient transport officers who are involved directly with patients. Experiencing cumulative trauma is an unavoidable and unique consequence of the first responder role.²⁸ These experiences can greatly increase the risk of developing a mental health illness or make an underlying issue worse, and can either have an immediate effect or may build up over weeks, months or years.

beyondblue, with the support of the Commonwealth Department of Health, has established a *good practice framework for mental health and wellbeing in first responder organisations* to support organisations in improving workplace conditions and addressing workforce issues including suicide (see Figure 4). Core elements of the framework focus on training and development for management (*Core action area 3: Develop leadership capability*) as well as the workforce (*Core action area 5: Educate and prepare your workforce*). They include pre-trauma education and training as well as education and training from the recruitment stage through to retirement, and cover a broad range of mental health topics.

beyondblue's National Mental Health and Wellbeing Study of Police and Emergency Services also involves

developing strategies to improve the mental health of police and emergency services workers and volunteers. This study commenced in 2017 and aimed to survey up to 20,000 current and former personnel to better measure the extent of the mental health issues in the workforce.²⁹

The NSW Government has also established a *Mental Health and Wellbeing Strategy for First Responder Organisations in NSW* outlining key strategies to reduce barriers to first responders seeking help. Mental health and wellbeing education will assist first responder organisations in helping to achieve this.

The importance of training first responders to develop a range of skills to build resilience and cope with the demands of their jobs is paramount, and training package products should evolve with the strategies as outlined in these good practice frameworks to maximise workforce wellbeing.

Figure 4 Good practice model for mental health and wellbeing in first responders organisations



Source: beyondblue, A Good Practice Framework for Mental Health and Wellbeing in First Responder Organisations.



Technology and Digital Health

Digital health technologies have the potential for improving health and medical care. These technologies can effectively provide information, support and social networks for health consumers and improve health care access and delivery. Examples of these technologies include self-monitoring wearable devices, such as Fitbits and smartwatches, or applications such as Telehealth technologies and electronic health records and patient portals. The use of electronic information can help with communication via shared access to electronic health records in order to facilitate continuity of care.³⁰

Health technologies will likely lead to greater sharing of data and information. This is where real value is created for both consumers and health providers. Software that links health data across health care and social services, such as the National Disability Insurance Scheme (NDIS) and aged care, provides greater information to deliver appropriate health care to connect communities. It will improve care provision and data integration and decrease 'silos'.³¹ This can also have an impact on safety within the health system. The increase in the provision of clear and detailed information to clinicians, including routine data and patient-experience data, will allow clinical teams to see how they are performing compared to their peers, and how they can improve.³²

Technological advancements within the ambulance and paramedic sector have meant that the skills needs of the workforce have been shifting to adapt to the digitalisation of functions. Current and upcoming technologies within the sector include:

- **Computer Aided Dispatch (CAD)** - centralised emergency and patient transport call-taking and dispatch system that utilises software for logging and allocating resources to Triple Zero (000) calls. It can also display vehicle and incident information in real time through the use of GPS tracking of all frontline ambulances to assist in the dispatch process.
- **Automatic Vehicle Location (AVL)** and Mobile Data Terminals (MDTs) - systems to track the location of ambulance and service vehicles for improved efficiencies in transport allocations.

- **Smart Ambulance** - ambulance vehicles equipped with technology to facilitate sharing real-time patient data from an ambulance to the hospital emergency department to better track a patient's condition.³⁴
- **Emergency Vehicle Priority** - technology that enables emergency vehicles to automatically trigger traffic light sequences to change along the most direct route when responding to an emergency call.
- **Virtual Reality (VR) training** - Virtual Reality goggles are being used as part of training to enhance situational awareness of ambulance officers, paramedics and other emergency support staff, and provide more virtual experience of difficult scenarios.
- **High-Fidelity training** - high-fidelity patient simulation (HPS) refers to the use of computerised mannequins that simulate real-life scenarios. Long used in medical schools and the military, HPS is quickly becoming essential in the training of ambulance officers and paramedics.
- **Electronic Patient Care Records (ePCR)** - accurate, consistent and real-time patient records are accessible via electronic devices such as iPads and enable officers to submit information efficiently and remotely.
- **Body Cameras** - high-tech body cameras are being trialled with paramedics in order to improve safety and reduce incidents of occupational violence.
- **Telehealth** - to support health assessment and treatment, particularly in remote areas.

With new technology comes the need for training to ensure skills are sufficient to implement technologies to their full capacity.

Rural and Remote Communities and Environments

There are many areas of concern with regard to the health and access to services of people in rural and remote communities in Australia. Health concerns include higher mortality rates and lower life expectancy; high reported rates of high blood pressure, diabetes and obesity; higher death rates from chronic disease; a higher prevalence of mental health problems; poorer dental health; a higher incidence of poor ante-natal and post-natal health; and a higher incidence of babies being born with low birth-weight.³⁵

For health planners, minimising barriers to access to primary health care (PHC) has long been, and remains, one of the most important issues facing health service planners charged with ensuring adequate and equitable health care services for residents in rural and remote areas. This includes ambulance and paramedic services which are the primary providers of 24/7 responses to emergency and non-emergency medical and trauma-related incidents. Factors impacting both service delivery and the skills needs of a PHC workforce in these areas include a harsh climate, a lack of economic opportunities, the demographic structure and geographical isolation. These communities also often lack a critical population mass needed to support sustainable health services, which in turn leads to difficulties in attracting and retaining PHC workers.³⁶

In order to improve resource planning for rural and remote areas a new measurement of access to health services through an Index of Access has been proposed which can improve the planning, targeting and resource allocation of PHC services.³⁷ Health service planning strategies based on inadequate measures of access risk prolonging or even exacerbating existing inequities in access to PHC services, particularly those that are most evident in rural and remote areas. Employing a fit-for-purpose access measure such as the Index of Access enables improved planning and distribution of health resources, including ambulance and paramedic services.

Once areas are identified for the allocation of resources there need to be strategies in place to encourage the PHC workforce to take up positions in these areas. A range of programs has been implemented over the years to encourage practice outside the major cities. These programs target students through scholarships and access to bonded places, early practice and specialist training through pre-vocational and rural and remote health placements, and by return of service obligations and established practitioners through a range of incentive programs.³⁸ It is important to consider articulation from the qualifications overseen by this IRC, for those wishing to pursue a path to AQF Level 7 programs in related health fields as one way of increasing the uptake of these qualifications. For example, the Indigenous Cadet scheme

offered by the Queensland Ambulance Service enables students to complete the *Certificate III in Non-Emergency Patient Transport* and *Certificate IV in Health Care* as a pathway to a Bachelor of Paramedic Science degree.

In addition to health concerns in rural and remote communities, clinical work in remote and extremely remote environments such as offshore oil rigs, mine sites and the Defence force is heavily relied upon. Due to the extreme remoteness of these environments, where immediate assistance retrieval and helicopter or fixed-wing aircraft may not be considered an option for more than 24 hours due to reasons such as geography and weather, medical staff may be working alone for several hours before assistance arrives, and require a multidisciplinary approach to their training.

Services Delivered by Private Providers

This sector has seen a considerable shift in non-emergency ambulance services moving into the private sector.

The Victorian Government de-regulated the market for non-emergency services in the mid-1990s. This led to the development of a significant private sector which delivers patient transport services under sub-contract arrangements to Ambulance Victoria and directly contracted services to a range of health facilities. Other states and territories have followed Victoria's lead and contracted private operators to provide transport for non-emergency hospital incidents, accidents and Workers Compensation cases, thereby increasing competition among private providers. However, some states, such as NSW, for example, have separated patient transport and event services from the ambulance service into other parts of government. In NSW this comes under the remit of HealthShare NSW. It is important to understand how the training package products can support the requirements of these sectors.



Employment and Skills Outlook

Labour Force Data

Ambulance and Paramedic Training Package qualifications can lead to employment in a wide range of roles that involve multiple emergency and non-emergency medical support responsibilities. The role titles can be as varied as the responsibilities with which workers are tasked. Examples of job roles include ambulance officer, community-based first responder (CFR), workplace first responder, emergency medical responder, radio dispatcher, personal service worker, emergency service worker and volunteer first aider.³⁹

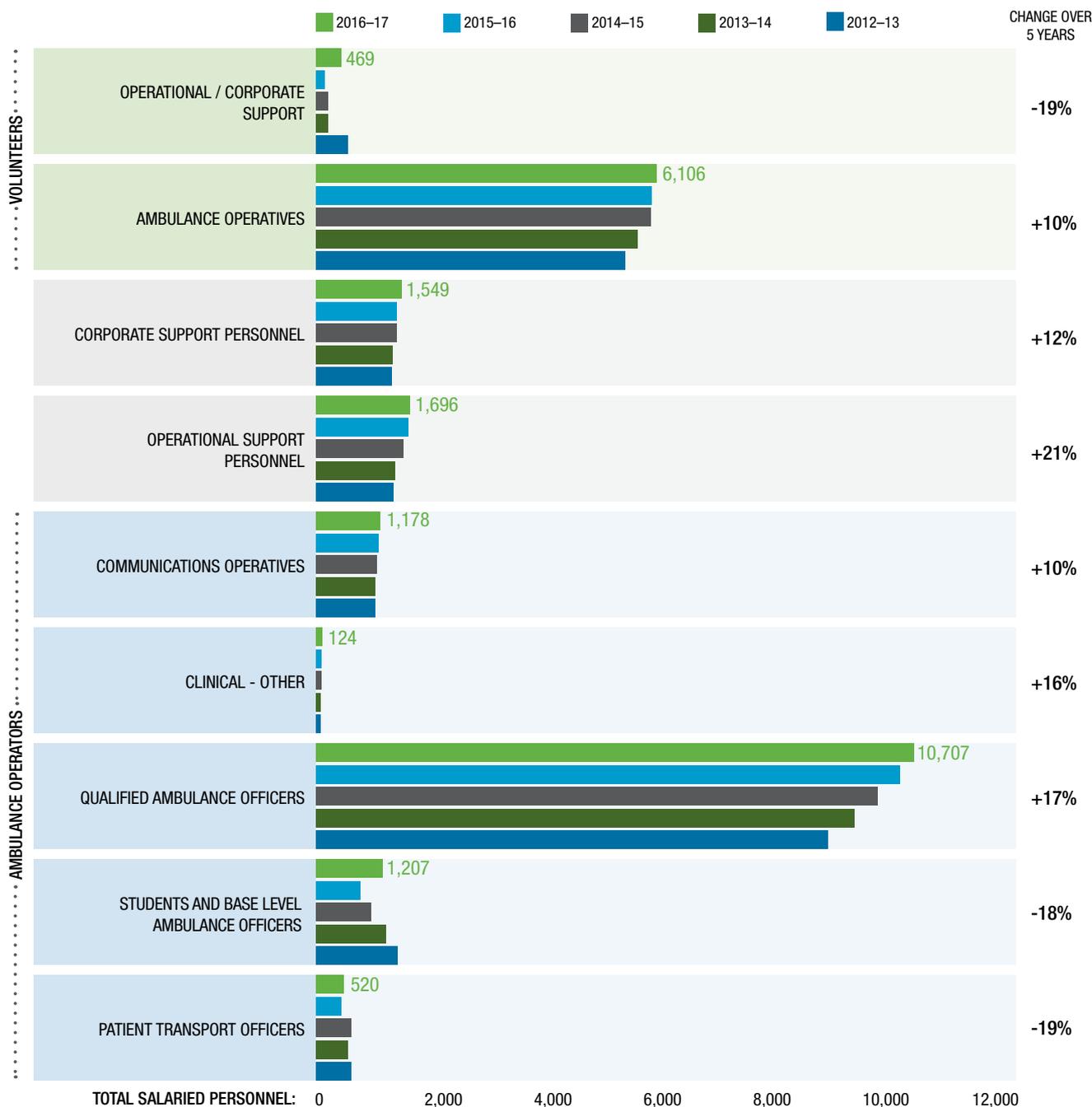
The Productivity Commission's *Report on Ambulance Services*⁴⁰ shows that the total FTE salaried workforce in ambulance services is 16,980 (2016–17). 81% are in operative ambulance roles, with the remaining 19% in corporate and operational support roles (see Figure 5). The number of qualified ambulance officers and communication operatives which these training package products support (either directly with qualifications or by providing career pathways) has grown noticeably over the past five years (by 17% and 10% respectively). Within the ambulance services sector, the number of patient transport officers and student or base-level ambulance officers has fallen (decreases of 19% and 18% respectively). However, this trend is more likely to represent a shift out of the ambulance-related services sector and into private enterprise provision, as discussed above.

Volunteering is a significant component supported by these training package products, and involves qualified individuals actively applying their skills in basic health care, communication and patient transport across different unpaid roles. These roles can include community transport volunteers, volunteer ambulance officers, volunteer first medical responders at events, and other health service support roles. There is no central data source which provides a count of volunteers involved in all these roles, and it is therefore difficult to accurately measure the size of the relevant volunteer workforce supported by these training package products. Previous reports published

by Volunteering Australia show that, in 2010, 7% of adult volunteers worked in emergency service organisations, 22% in welfare/community organisations and 9% in health organisations (which equates to over two million adults⁴¹). Figure 5 shows that just over 6,500 volunteers were involved in ambulance services with the majority (92.9%) active in operative roles rather than administrative and support function areas. Volunteering in this area has been increasing steadily over the past five years.



FIGURE 5 AMBULANCE SERVICE ORGANISATIONS' HUMAN RESOURCES - FTE SALARIED PERSONNEL AND VOLUNTEERS OVER TIME



Source: Report on Government Services 2018 – Ambulance Services (Part E, Chapter 11, Table 11A.8).

Workforce Data Note:

Employment data collected and published by the Department of Jobs and Small Business does not include trends across all occupations supported by the training package products but instead combines counts with other VET- and non-VET-supported roles. For example, employment data for ambulance officers is currently reported jointly with that for paramedics (under the title Intensive Care Ambulance Paramedics) and categorised under the Australian and New Zealand Standard Classification of Occupations (ANZSCO) as the occupation code of 4111: *Ambulance Officers and Paramedics*. To supplement the trends provided above, an overview of *Ambulance Officers and Paramedic* data published by

the Department is provided below. Please note that this is presented as an indicative snapshot only of a small proportion of the workforce, including paramedic roles to which the training package products provide pathways. It does not include other key occupations such as first medical responder, patient transport officer or volunteers.

Ambulance and paramedic roles can involve attending accidents, emergencies and requests for medical assistance; assessing the health of patients and determining their need for assistance; transporting sick and disabled persons to and from medical facilities; and instructing community groups and essential service workers in First Aid. Key skills requirements involve predominantly 'soft skills', especially critical thinking and active listening. The main characteristics of the workforce are as follows:⁴²

- The average age of the **workforce is 43 years**, just over the national age average of 40 years.
- A significantly **higher proportion of workers are male** (62.7%) compared to females (37.3%).
- The majority of workers are **employed full-time**, representing 83.8% of workforce contracts.
- Nearly all (94.9%) workers are **employed in the Health Care and Social Assistance sector**, with the remaining workforce employed in Public Administration and Safety and the Education and Training sectors.
- The most common qualifications obtained are a **Bachelor degree** (43.8%) or an **Advanced Diploma/ Diploma** (42.2%).
- Over the next five years, the number of ambulance officer and paramedic jobs is expected to grow by 24.5% (equivalent to an additional 4,200 jobs) across Australia, to reach a workforce level of 21,400.



2017 – 2022:

+24.5% growth

+4,200 jobs

Top Skills Areas

- Critical Thinking
- Active Listening
- Coordination
- Speaking
- Service Orientation

Top Knowledge Areas

- Customer and Personal Service
- Medicine and Dentistry
- Public Safety and Security
- English Language
- Education and Training

Source: Australian Government Department of Jobs and Small Business, Job Outlook.

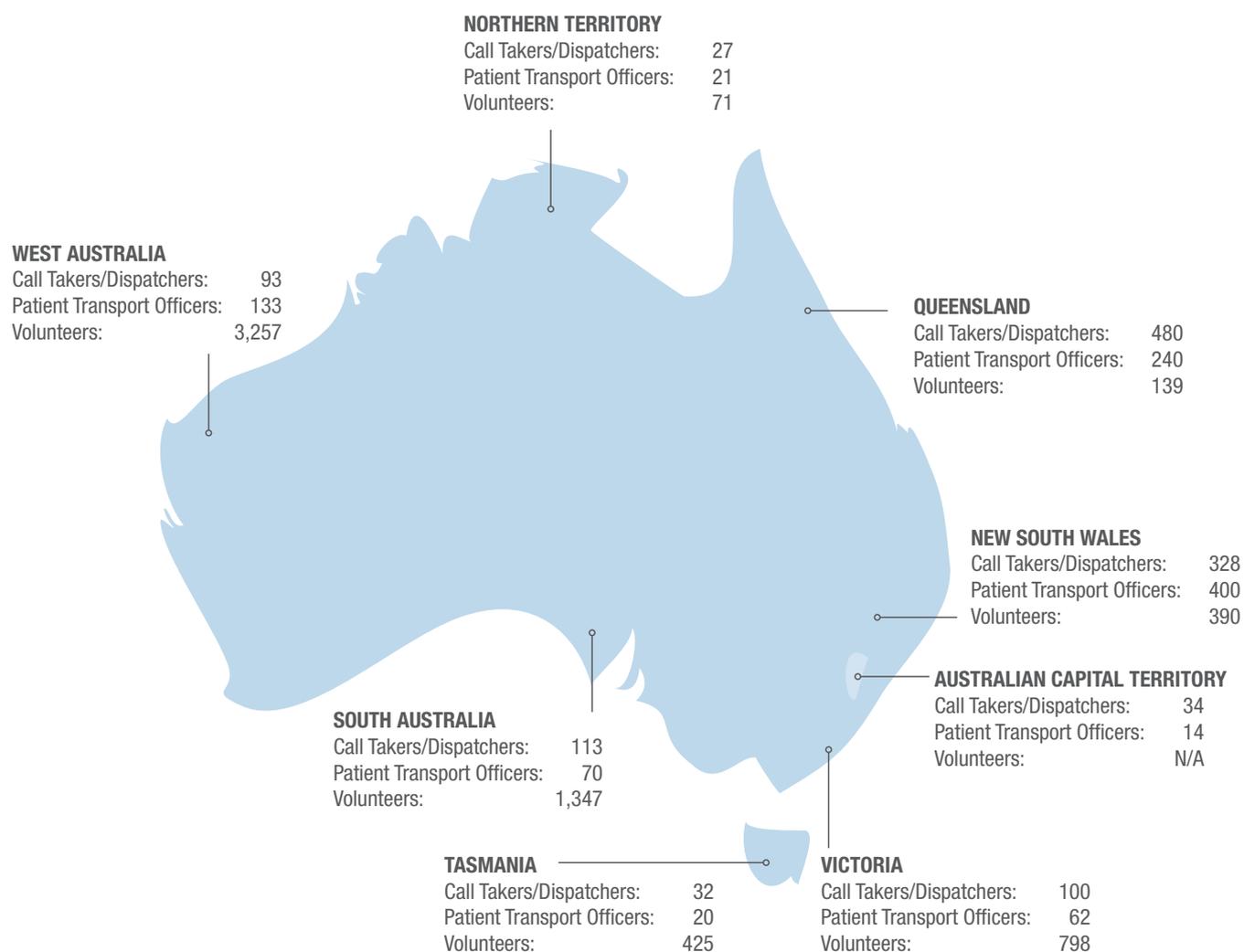


Other role types supported by the training package products are distributed across different ANZSCO codes related to health, community and personal service workers. **The spread and ambiguous nature of role titles means that it is difficult to determine the true size and nature of the workforce.** Examples of roles for which it is difficult to quantify the public and private sector workforce include:

- **First responders** - The majority of people in this role are volunteers or individuals who undertake the role as part of other duties in their workplace. The *Certificate II in Medical Service First Response* is primarily designed to assist in training people for this function. St John Ambulance Australia has approximately 10,000 volunteers who are first responders. Community first responders are also role types in this category.
- **Advanced Responders** - Many workplaces (particularly mining and industrial sites) employ people to provide a level of service which is above that of first responder roles. Their scope of practice will vary depending on organisational needs and relevant state/territory legislation. The *Certificate III in Basic Health Care* and *Certificate IV in Health Care* provide relevant training for these positions.

A preliminary breakdown of specific roles representing call takers and dispatchers (i.e. communications operatives), patient transport officers and volunteers (in a range of roles such as first responders, ambulance officers, etc.) as provided by ambulance service organisations is mapped in **Figure 6. These figures represent minimum workforce counts** as neither participation in the private sector nor that in the non-ambulance service-related provision sector is included. Actual numbers will be significantly higher.

Figure 6: Ambulance Service Organisations' Human Resources - total number of FTE Salaried Personnel and Volunteers by Role Types (2016–17)



Source: Report on Government Services 2018 – Ambulance Services (Part E, Chapter 11, Table 11A.8), and IRC contribution



Future Skills Needs

Science, Technology, Engineering and Mathematics (STEM) Skills

With the constant evolution of technology through automation, artificial intelligence (AI) and robots, the skills needed in the coming years will be vastly different to those required yesterday and today. It is imperative that this be factored in to training packages as they are developed, adapted and updated. Technological disruption, as it has done in the past, will replace some industries, companies and workers, especially those that lack the flexibility to adapt.

Australians are generally welcoming of technology and most believe that innovation and new technology development is vital for Australia's future prosperity.⁴³ There are some claims that, solely as a result of new technologies, approximately 40% of the workforce will be replaced by computers in the next 10 to 15 years.⁴⁴ In the case of the ambulance and paramedic sector, driverless ambulance vehicles are being studied in relation to transporting low-risk patients.⁴⁵

New technology can also pave the way for new jobs and often replaces inefficient processes. In order to succeed in the age of automation many believe that STEM (Science, Technology, Engineering and Maths) skills are part of the answer when it comes to preparing workers for jobs of the future. The focus on STEM, while not new, is crucial to building a twenty-first century knowledge-based economy underpinned by data, digital technologies and innovation, which are essential for growth.⁴⁶ Digital literacy and being competent in the use of different technology platforms will also be essential skills in the future. Without basic digital competencies a person will not have the skills to negotiate the digitally-connected world which is now the norm.⁴⁷ Workers will need the ability to use digital technology in their jobs to develop, access and use information and digital content; communicate and collaborate through digital technologies; manage their digital identity; and use and protect their digital devices, personal and organisational data, and privacy.⁴⁸ This

will be important for the ambulance workforce as in the future the delivery of health services and the collection of related data will involve technology and digital literacy.

While STEM skills are critical for future skill needs, other **softer skills are just as important**. Soft skills include things like communication, teamwork, problem solving, emotional judgement, professional ethics and global citizenship. *Deloitte Access Economics* forecasts that two-thirds of jobs will be soft skill-intensive by 2030.⁴⁹ Megatrends like technology advancement and globalisation will contribute to more demand for people with soft skills as the geographical barriers fall due to technology, making it easier to connect people across countries.⁵⁰

Key Generic Skills

– Ranked in Order of Importance

Note: The 12 generic skills listed below, including the descriptors, were provided by the Department of Education and Training for the purpose of being ranked by industry representatives. For the 2018 ranking exercise, an 'Other' generic skill option was included in the list to capture any additional key skills considered important for an industry. Please note that, in this case, no other generic skills were identified.

1	LEARNING AGILITY / INFORMATION LITERACY / INTELLECTUAL AUTONOMY / SELF-MANAGEMENT	Ability to identify a need for information. Ability to identify, locate, evaluate, and effectively use and cite information. Ability to develop a working knowledge of new systems. Ability to work without direct leadership and independently.
2	COMMUNICATION / COLLABORATION / SOCIAL INTELLIGENCE	Ability to understand/apply principles of creating more value for customers, and collaborative skills. Ability to critically assess and develop content with new media forms and persuasive communications. Ability to connect in a deep and direct way.
3	MANAGERIAL / LEADERSHIP	Ability to effectively communicate with all functional areas in the organisation. Ability to develop tasks and processes for desired outcomes. Ability to oversee processes, guide initiatives and steer employees toward the achievement of goals.
4	TECHNOLOGY AND APPLICATION	Ability to create or use technical applications, understand their interrelation with life, society, and the environment. Ability to understand/apply scientific or industrial processes, inventions, methods. Ability to deal with mechanisation/automation. /computerisation.
5	DESIGN MINDSET / THINKING CRITICALLY / SYSTEM THINKING / PROBLEM SOLVING	Ability to adapt products to rapidly shifting consumer tastes and trends. Ability to determine the deeper meaning or significance of what is being expressed via technology. Ability to understand how things that are regarded as systems influence one another within a complete entity, or larger system. Ability to think holistically.
6	LANGUAGE, LITERACY & NUMERACY (LLN)	Foundation skills of literacy and numeracy.
7	DATA ANALYSIS	Ability to translate vast amounts of data into abstract concepts and understand data-based reasoning. Ability to use data effectively to improve programs, processes and business outcomes. Ability to work with large amounts of data.
8	CUSTOMER SERVICE / MARKETING	Ability to interact with other people, whether helping them find, choose or buy something. Ability to supply customers' wants and needs. Ability to manage online sales and marketing. Ability to understand and manage digital products.
9	STEM (Science, Technology, Engineering and Maths)	Sciences, mathematics and scientific literacy.
10	ENTREPRENEURIAL	Ability to take any idea and turn that concept into reality/make it a viable product and/or service. Ability to focus on the next step/move closer to the ultimate goal. Ability to sell ideas, products or services to customers, investors or employees, etc.
11	FINANCIAL	Ability to understand and apply core financial literacy concepts and metrics, streamlining processes such as budgeting, forecasting, and reporting, and stepping up compliance. Ability to manage costs and resources, and drive efficiency.
12	ENVIRONMENTAL / SUSTAINABILITY	Ability to focus on problem solving and the development of applied solutions to environmental issues and resource pressures at local, national and international levels.



Key Drivers for Change and Proposed Responses

Drivers for Change and Skill Needs

A widespread **multichannel consultation** involving the following stakeholders has been conducted to identify and validate the exact nature of the skills needs of the industry and the respective training package product update requirements:

- **All Ambulance and Paramedic Industry Reference Committee (IRC) members** representing the following key bodies:
 - Council of Ambulance Authorities
 - Ambulance Tasmania
 - Australia & New Zealand College of Paramedicine
 - SA Ambulance Service
 - Ambulance Employees Australia – Victoria
 - Department of Defence
 - St John Ambulance Western Australia Ltd
 - Paramedics Australasia
 - NSW Ambulance

- Executive Risk Solutions
- ACT Ambulance Service
- St John Ambulance Australia
- Paramedical Services
- Queensland Ambulance Service

- **Extended networks** of the Ambulance and Paramedic IRC members
- **Individuals and organisations in the extensive SkillsIQ database** who were invited to participate in an online survey during November and December 2017 to identify the top skills needs and industry issues.
- **Stakeholders via public consultation** using the draft Industry Skills Forecast, which was made available to the public during March 2018.

Around 17,000 stakeholders listed in the SkillsIQ database were notified of the consultation periods via email, inviting them to comment and provide feedback.

Industry has now identified key drivers for change in the Ambulance and Paramedic Training Package products. These are as follows:

Regulation and Registration

A recent and significant regulatory change for the sector has been the national registration for paramedics as part of the National Registration and Accreditation Scheme. The Paramedicine Board of Australia was established in October 2017 and, together with the Australian Health Practitioners Regulation Agency (AHPRA), has been tasked with developing and establishing registration standards including qualification requirements, codes and guidelines. Registrations are expected to open in mid-2018, with national regulation expected to take effect in late 2018.

The outcomes of the consultation regarding qualification requirements for registration will impact the role of VET qualifications in supporting individuals moving into paramedicine and ambulance-related positions. Mapping VET qualifications across registration requirements and, more widely, across the post-registration occupational environment will be important to gaining an understanding of the supportive ways in which the training package products can contribute to facilitating career pathways.

Rural and Remote Communities and Environments

A range of programs have been implemented over the years to encourage practice outside the major cities. These programs target students through scholarships and access to bonded places, early practice and specialist training through pre-vocational and rural and remote health placements, and by return of service obligations and established practitioners through a range of incentive programs. It is important to consider articulation from qualifications in this training package for those wishing to pursue a path to AQF Level 7 programs in related health fields as one way of increasing the uptake of these qualifications.

Privatisation

In practice, the workforce is distributed across both the public sector and private sector. Historically, services such as patient transport, emergency response and life support services have been provided by state and territory governments via state ambulance services. However, there has been a gradual split in the delivery of these function areas, with some formerly ambulance-specific services now being outsourced by governments to non-ambulance service providers, particularly in the area of non-emergency patient transport. State and territory governments are also increasingly outsourcing the delivery of these services to private enterprise and today a large proportion of the workforce supported by these training package products is located in the private sector. As previously noted, the inclusion of paramedics in the National Registration and Accreditation Scheme under the Health Practitioner Regulation National Law will see a significant regulatory change for the sector. This may also have a further flow-on effect of growing the demand for privately operated services with a correlating increase in demand for these training package products in direct and/or supporting roles. It is important to understand how the training package products can support the requirements of these sectors.

Technology

Technological advancements within the ambulance and paramedic sector have meant that the skills needs of the workforce have been shifting to adapt to the digitalisation of functions. Current and upcoming technologies within the sector include:

- Computer-Aided Dispatch (CAD)
- Automatic Vehicle Location (AVL) and Mobile Data Terminals (MDTs)
- Smart Ambulances
- Emergency Vehicle Priority
- Virtual Reality (VR) Training
- High-Fidelity Training
- Electronic Patient Care Records (ePCR)
- Body Cameras
- Telehealth.

With new technology comes the need for training to ensure skills are sufficient to implement technologies to their full capacity.



Workforce Issues

Occupational Violence

Over the years, the likelihood of being exposed to an assault as an emergency services worker has become a characteristic of the role and some triggers have been directly related to the rise in crystal methamphetamine ('ice') and alcohol-fuelled violence.

While raising community awareness has seen some positive trends in reducing incidents, occupational violence is currently (and is forecasted to be) a significant ongoing consideration for the workforce. Workforce training is a fundamental component for addressing the issues, and training package products will therefore need to ensure they evolve to include key skills for assessing potential incidents of violence, and strategies to address them.

Mental Health

As mental health issues grow in prevalence across both the general population and the ambulance and paramedic workforce, workforce mental health strategies will become increasingly important, and these will include the provision of relevant training to ensure individuals are provided with appropriate mechanisms to deal with the difficulties they face in their work.

Wellbeing and Resilience

Experiencing cumulative trauma is an unavoidable and unique consequence of the out-of-hospital role. These experiences can greatly increase the risk of developing a mental health illness or make an underlying issue worse, and can either have an immediate effect or may build up over weeks, months or years.

The importance of training out-of-hospital workers to develop a range of skills to build resilience and cope with the demands of their jobs is paramount, and training package products should evolve to maximise workforce wellbeing.

Proposed Response

To address these workforce skills issues, it is proposed that **seven qualifications, 14 units of competency and one**

skill set within the HLT Health Training Package relating to the ambulance and paramedic sector be updated in 2018–19. A full list of training package products proposed for update may be seen in the *2018–19 Proposed Schedule of Work* table which follows this section.

Updates are required to reflect the changing duties relevant to the job roles of pre-hospital and out-of-hospital health care workers and to address the issues that have been raised in this document. The precise extent and nature of the updates will be confirmed during the industry consultation on draft training package products, as industry input is received. However, the areas noted above and outlined in the 2018–19 Schedule (which follows) will be addressed at a minimum. This may result in the creation of new units, if required.

A number of potential risks have been identified and are tabled below should the update of the training package (in line with addressing the skills needs voiced by industry) **not** take place.

STAKEHOLDER	RISK OF NO CHANGE
Employers	<ul style="list-style-type: none"> - Heightened risk of patient experiencing poor quality care and/or negative effects of treatment - Cost implications include time allocated to conduct in-house training with staff - Staff turnover may be further affected by the lack of appropriate training and pathways
Employees	<ul style="list-style-type: none"> - Inability to conduct all duties of role adequately and/or progress - Increase patients' health risks - Receive poor and inadequate training by accessing unaccredited and/or unsuitable training options for Australian practices
Students	<ul style="list-style-type: none"> - Graduate with insufficient skills to support the pre-hospital and out-of-hospital health care sector, thereby reducing employability
Training Providers	<ul style="list-style-type: none"> - Training offered does not match industry needs, and quality and reputation of course delivery is compromised.

The proposed response aims to ensure the pre-hospital and out-of-hospital health care service sector is supported by a high quality trained and skilled workforce. Facilitating access to training in these specialty areas will support the sector to improve efficiencies in operations, but also maximise patient health and welfare in all pre-hospital and out-of-hospital health care settings.

Impact of Recommended Changes

RTOs

The implementation of new units of competency and qualifications creates flow-on impacts and costs for RTOs in relation to administrative systems, training resources and assessment materials. In the short term, it is anticipated that there will be an administrative burden on RTOs as they transition to delivery of the new training package products and update their scope of registration, resources and assessment tools. This is, however, unavoidable. RTOs will be required to ensure the appropriate equipment and resources are available for the delivery of Ambulance and Paramedic Training Package products.

Employees and Students

Employees and prospective employees who are currently studying to enter the sector will benefit from industry-relevant training which will ensure they are equipped with the requisite skills to carry out their jobs.

Employers

Employers will benefit from a decrease in the requirements for in-house training to address skills gaps in the current qualifications. This will lower costs and reduce the time required by staff to attend training. Staff retention will also be impacted positively, as staff benefit from additional skills development, again reducing the burden on employers in recruiting and onboarding new employees.

General Public/Patients

The greatest impact will be found in the case of patients, who represent the Australian public at large and will benefit from receiving more effective pre-hospital and out-of-hospital treatment and care. Given the recognised importance of effective pre-hospital and out-of-hospital treatment and care in improving patient outcomes, this is a significant positive consequence for the update of Ambulance and Paramedic Training Package products.



Proposed Schedule of Work

2018–19

YEAR	PROJECT TITLE	DESCRIPTION
2018–19	Medical Service First Response	The IRC proposes to update the following qualification and any associated units of competency relating to Medical Service First Response job roles: <ul style="list-style-type: none"> • HLT21015 Certificate II in Medical Service First Response
2018–19	Ambulance Communications (Call-taking)	The IRC proposes to update the following qualification and any associated units of competency relating to Ambulance Communications (Call-taking) job roles: <ul style="list-style-type: none"> • HLT31015 Certificate III in Ambulance Communications (Call-taking)
2018–19	Non-Emergency Patient Transport	The IRC proposes to update the following qualification and any associated units of competency relating to Non-Emergency Patient Transport job roles: <ul style="list-style-type: none"> • HLT31115 Certificate III in Non-Emergency Patient Transport
2018–19	Basic Health Care	The IRC proposes to update the following qualification and any associated units of competency relating to Basic Health Care job roles: <ul style="list-style-type: none"> • HLT31215 Certificate III in Basic Health Care
2018–19	Ambulance Communications (Dispatch)	The IRC proposes to update the following qualification and any associated units of competency relating to Ambulance Communications (Dispatch) job roles: <ul style="list-style-type: none"> • HLT41015 Certificate IV in Ambulance Communications (Dispatch)
2018–19	Health Care	The IRC proposes to update the following qualification and any associated units of competency relating to Health Care job roles: <ul style="list-style-type: none"> • HLT41115 Certificate IV in Health Care
2018–19	Paramedical Science	The IRC proposes to update the following qualification, associated skill set and units of competency relating to relevant job roles. This will occur in the context of factors relevant to the implementation of paramedic regulation as determined by the Paramedicine Board of Australia: <ul style="list-style-type: none"> • HLT51015 Diploma of Paramedical Science • Advanced Paramedical Science Skill Set



2018-19 Project Details

PROJECT TITLE	AMBULANCE AND PARAMEDIC
Description:	Update Ambulance and Paramedic Training Package products in the HLT Training Package
Rationale:	<p>It is proposed that the Ambulance and Paramedic Training Package products be updated in the 2018–2019 year due to the sector currently experiencing challenges and opportunities which are impacting workforce skill requirements, including:</p> <ul style="list-style-type: none"> • Regulation and Registration - A recent and significant regulatory change in the sector has been revision to the National Law involving a greater restriction on the use of the term 'Paramedic'. As a result, there will now be a requirement for national registration of paramedics as part of the National Registration and Accreditation Scheme ('the National Scheme'). The outcomes of the consultation regarding qualification requirements for registration expected later this year will impact the role of VET qualifications in supporting individuals moving into paramedicine and ambulance-related positions. • Rural and Remote Communities and Environments – Ensuring an adequate supply of skilled staff is paramount in rural and regional environments. • Privatisation - As previously noted, the inclusion of paramedics in the National Registration and Accreditation Scheme under the Health Practitioner Regulation National Law will see a significant regulatory change for the sector. This may also have a further flow-on effect of growing the demand for privately operated services with a correlating increase in demand for these training package products in direct and/or supporting roles. • Technology - Technological advancements within the ambulance and paramedic sector have meant that the skills needs of the workforce have been shifting to adapt to the digitalisation of functions. • Workforce Issues - including occupational violence, mental health, wellbeing and resilience. <p>Please refer to the section above titled Key Drivers for Change and Proposed Responses in this document for further detail.</p>
Ministers' Priorities Addressed:	<p>This project is an opportunity to support the Council of Australian Governments (COAG) Industry and Skills Council to specifically address the following priorities:</p> <ol style="list-style-type: none"> 1. Identify and remove obsolete training package products from the system 2. Identify industry expectations for training delivery and assessment (to be documented within the Companion Volume Implementation Guide) 3. Enhance the portability of skills within the parameters of these specialised job roles. 4. Remove unnecessary duplication within the system. However, due to the specific nature of the health care industry it may not be possible for HLT Training Package products to be applied across non-health-related industries. 5. Include the update of an existing skill set.
Consultation Plan:	Key stakeholders identified earlier in this document will be consulted. A national industry consultation will be conducted with key stakeholders, and there will be opportunities for all interested parties to provide their comments online via the SkillsIQ Online Feedback Forum.
Timing - Estimated Duration of Project and Key Dates:	Commence July 2018, subject to AISC approval. Estimated duration: 12 months.
Training Package to be Revised:	HLT Health Training Package
Skill Set/s to be Developed/ Updated:	<p>One skill set to be updated:</p> <ul style="list-style-type: none"> • HLTSS00063 Advanced paramedical science skill set

<p>Qualification/s to be Developed/Updated:</p>	<p>Seven qualification to be updated:</p> <ul style="list-style-type: none"> • HLT21015 Certificate II in Medical Service First Response • HLT31015 Certificate III in Ambulance Communications (Call-taking) • HLT31115 Certificate III in Non-Emergency Patient Transport • HLT31215 Certificate III in Basic Health Care • HLT41015 Certificate IV in Ambulance Communications (Dispatch) • HLT41115 Certificate IV in Health Care • HLT51015 Diploma of Paramedical Science
<p>Unit/s of Competency to be Developed/Updated:</p>	<p>14 Units of Competency to be updated:</p> <ul style="list-style-type: none"> • HLTAMB001 Follow procedures for routine safe removal of patient • HLTAMB002 Implement safe access and egress in an emergency • HLTAMB003 Transport emergency patients • HLTAMB004 Conduct advanced clinical assessment • HLTAMB005 Receive and respond to requests for ambulance service • HLTAMB006 Assign and coordinate ambulance service resources • HLTAMB007 Assess and deliver basic clinical care • HLTAMB008 Assess and deliver standard clinical care • HLTAMB009 Deliver intensive clinical care • HLTAMB010 Manage and coordinate resources for emergency operations • HLTAMB011 Manage a routine non-emergency scene • HLTAMB012 Communicate in complex situations to support health care • HLTAMB013 Contribute to managing the scene of an emergency • HLTAMB014 Transport non-emergency patients under operational conditions



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