FAIRCLOTH McNAIR
& ASSOCIATES

Needs Analysis Report

WA Aged Care Training Centre of Excellence

December 2023

CITY OF MANDURAH

PEEL Development Commission

Your innovation and impact partners

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Acronyms

ABS..... Australian Bureau of Statistics

ACEPT..... Australian Centre for Energy and Process Training

ACPR ..... Aged Care Planning Region

AHA..... Allied health assistant

AI..... Artificial intelligence

AIHW..... Australian Institute of Health & Welfare

ARC ..... Australian Research Council

CHSP ..... Commonwealth Home Support Program

COE ..... Centre(s) of Excellence

COM..... City of Mandurah

DTWD ..... Department of Workplace Training and Development

EN ..... Enrolled nurse

FMA ..... Faircloth McNair & Associates

HCP ..... Home Care Package

LGA ..... Local Government Area

LOTE..... Language(s) other than English

MSW ..... Metropolitan South West (a Perth-oriented Commonwealth ACPR)

PCW ..... Personal care worker (usually in a RAC setting)

PDC ..... Peel Development Commission

RAC (F) ..... Residential Aged Care (Facility)

RN ..... Registered nurse

RTO ..... Registered Training Organisation

SW..... Support worker (usually in a community setting)

TAFE ..... Technical & Further Education

VET..... Vocational Education & Training

Executive Summary

Background

The City of Mandurah is implementing the Transform Mandurah program - a disruptive program to support economic growth, diversification, and job creation as well as expand educational opportunities and quality of living options for residents.

Deloitte Access Economics was engaged by the City of Mandurah to undertake economic analysis to support the identification of opportunities to pursue, challenges to address, and actions to undertake. Deloitte's Mandurah's Economic Opportunities report[1], identified eight high-level opportunities for Mandurah's future economic development in the medium to long term which included building the capacity of the aged care workforce.

Key factors identified by Deloitte and COM include the following;

'Nearly 27 per cent of Australia's population (8.1 million people) are expected to be aged over 60 years by 2040, representing a rise of 46 per cent from 2020 – or 2.6 million more people. Locally, the Mandurah population aged 60 years and older is forecast to reach 40,279 by 2036, representing 33% of the municipality's total resident population. The aged care (and health) industry is a major employer in many parts of Western Australia and in particular the Peel region, comprising a diverse workforce and making a significant contribution to the local economy. Aged care consumers are diverse in age, cultural background, support structures and often have complex health needs, managing multiple chronic conditions. This complexity is set to increase into the future with people living longer and often entering the in-home or residential care system later in life with increasingly high care needs.'

In response, the Peel Development Commission and the City of Mandurah are investigating the possibility of providing a leading role in expanding innovative, future-proofed training to address significant forecast shortages of skilled labour in the aged care sector, initially within the region, leading to supporting the sector statewide. The possibility is being investigated within the context of a Centre of Excellence model.

Project Scope

The scope of work includes two phases: i) Needs Analysis and ii) Feasibility Study on establishing a WA Aged Care Training Centre of Excellence, located in Mandurah, to build the capacity of the State's aged care workforce. This report represents the first phase.

Needs Analysis Objectives

The objective of the Needs Analysis is to quantify the estimated demand for a WA Aged Care Training Centre of Excellence to deliver all levels of aged care workforce training required for the sector in WA.

Key considerations to determine if there is a case to proceed to the Feasibility Study include:

- The current and projected quantum of need for a trained and qualified aged care workforce in WA (demand)

[1] Deloitte Access Economics (2022), grey literature

- The extent to which current training providers can/do supply the required volume of aged care workers (supply)
- The extent to which current training providers can/do supply appropriately skilled aged care workers (quality)
- Could the proposed WA Aged Care Training Centre of Excellence deliver improved outcomes (supply and quality of aged care workforce), including an increase in the number of course completions
- Does the proposed WA Aged Care Training Centre of Excellence present an opportunity to improve economic activity in the City of Mandurah and the broader Peel region?

Basis for Calculating Workforce

Catchment

The primary catchment for the proposed COE is the Peel Region. A secondary catchment (SW Region and Kwinana and Rockingham LGAs) that is also likely to be served by a COE based in Mandurah has also been defined. The whole of WA is also addressed to support the potential for the COE to be a statewide service.

Population growth

The catchment's ageing population characteristics are driving strong demand for aged care services and will continue to drive this demand to 2031 and beyond. The study identifies very high growth of the very old population (85+ years); from 2021 to 2031, +64.8% Peel and +83% in the secondary catchment. The region's very old population will grow at a faster rate than that of the Perth Metro comparator region.

Peel in particular is already (2021 Census) structurally older than Perth Metro when the 55+, 70+ and 85+ populations are examined. This age structure will continue to drive strong demand beyond 2031.

Table 1: Population growth to 2031

Area	Age 55+	From 2021 % change	Age 70+	From 2021 % change	Age 85+	From 2021 % change
Peel catchment	63,610	+25.1%	27,340	+18.9%	5,755	+64.8%
Secondary catchment	143,720	+35.2%	63,650	+50.7%	11,715	+83.0%
Total catchment	**207,330**	**+32.0%**	**90,990**	**+39.5%**	**17,470**	**+76.6%**
Perth Metro comparator	**764,275**	**+32.7%**	**338,765**	**+45.0%**	**63,520**	**+55.5%**
WA	**973,025**	**+31.0%**	**435,440**	**46.8%**	**80,435**	**60.4%**

Source: WA Tomorrow Population Projections Report 11, Band D[2]

Aged care supply and demand – residential aged care

The catchments are currently undersupplied in relation to residential aged care places. The growth in absolute numbers and as a proportion of the population aged 85+ years will continue to drive strong demand for additional places. Regardless of the preference of older people to remain at home as they age, other factors will offset this preference including:

- A reduction of the proportion of unpaid (family) carers as detailed in 2.5.2 of this report
- Increasing length of life will result in higher numbers of persons living with dementia and the accompanying impact on behaviours/complexity that require management in a residential setting

[2] WA Tomorrow population estimates include categories ranging from A (most conservative) to E (highest growth rate). The use of band D is justified in this study section 3.3.3

- An increased role in residential aged care to provide palliative care (in 2021-22 most exits from permanent residential care were due to death, at 86% of exits)[3]
- With increased length of life there will be more people requiring technical nursing relating to comorbidities including the management of mental health and dementia in the last years of their lives

The 70+ years population is referenced by the Commonwealth to establish planning ratios. Based on the 70+ years population and the related planning ratios the following additional places will be required by 2031:

- The Peel region will require an additional 954 places requiring a $323,446,680.00 capital investment
- The secondary catchment will require an additional 2,400 places requiring a $813,667,800.00 capital investment
- The total catchment will require an additional 3,354 places requiring a $1,137,114,480.00 capital investment
- WA will require an additional 11,323 places requiring a $3,838,456,320.00 capital investment

Growth in residential aged care services will translate into the demand for a trained and qualified workforce, and will also drive demand for a building and construction workforce.

Table 2: Residential aged care demand 2031 – new places

Area	70+ Population	Total Demand	New Places to meet demand
Peel catchment	27,340	1,859	954
Secondary catchment	63,650	4,328	2,400
Total catchment	**90,990**	**6,187**	**3,354**
WA	**435,440**	**29610**	**11,323**

Sources: Calculated by FMA using the Aged Care Services List 2023, ABS Census 2021, WA Tomorrow population projections (Band D) 2026, 2031, Published and estimated benchmark data described in the notes to Table 12.

Aged care supply and demand – Home Care Packages (HCP)

The growth of the HCP program is documented in Table 3. HCP provides graduated funding according to assessed need. In the event that the calculated volume of residential aged care places are not constructed, the HCP program may grow at a faster rate than detailed in Table 3. The benchmark planning ratio is the Commonwealth's proxy for demand detailed in Table 3; the Commonwealth will likely restrain the growth of HCPs to these benchmarks regardless of the real demand unless costs can be offset by reducing supply in another part of the aged care system. This restraint is likely to be managed by preferencing the person with the highest assessed need and/or delaying the movement from lower levels of care to higher within the program.

Table 3: Supply and Demand for HCP 2031

Area	Places	Benchmark places per 1,000 70+	New places required by 2031
Peel catchment	1,695	62	312
Secondary catchment	3,946	62	947
Total catchment	**5,641**	**62**	**1,258**
WA	**26.997**	**62.0**	**5,985**

[3] AIHW GEN Data: People leaving aged care – Reason for Leaving Aged Care, Number of exits by care type and discharge reason 2021-22

Sources: See notes Table 14

Aged care supply and demand – Commonwealth Home Support Program (CHSP)

The number of CHSP clients by 2031 has been estimated (based on the growth of the 65+ population) as:

- Peel catchment: 5,717; an increase of 20.4% (2021 to 2031)
- Secondary catchment: 14,190; an increase of 970 (57.5%) 2021 to 2031
- Total catchment: 19,817; an increase of 5,183 (44.1%) 2021 to 2031
- WA 85,109 an increase of 24,248; (39.8%) 2021 to 2031

Summary of total Aged Care places required

The following summarises the number of new aged care places required (CHSP is expressed as clients).

Table 4: Total New Aged Care places by 2031

Area	Residential Aged Care Places	HCP - Places	CHSP Clients	Total new places /clients
Peel catchment	954	312	970	2236
Secondary catchment	2,400	947	5,183	8,530
Total catchment	**3,354**	**1,258**	**6,062**	**10,674**
WA	**11,323**	**5,985**	**24,248**	**41,556**

Source: Calculated by FMA drawing on: The Department of Health and Ageing Aged Care Services list 2021, Home Care Data Report 3rd quarter 2021-22 Productivity Commission ROGS Data 2023, WA Tomorrow report 11 band D, Aged Care Data Snapshot 2021; Department of Health Aged Care Data Warehouse published on GEN-agedcaredata.gov.au. and Ministerial announcement; planning ratios https://www.health.gov.au/our-work/aged-care-reforms/what-were-doing/sustainable-care

Aged Care Workforce

Each of the aged care programs requires a different ratio of workers to participant ratio. In community care (HCP and CHSP) this is based on funding levels related to assessed need; the estimated mix of service levels determines the workforce requirements. In residential aged care, the mandated minutes of care requirements relating to the care workforce is the basis for the calculation.

Table 5 details an aggregation of the workforce required to meet growth in services and to replace the retiring workforce across the three major aged care programs. There will need to be a significant lift in the training capacity and capability in the Peel catchment and the secondary catchment and also across WA to respond to this demand.

Table 5: New Aged Care workers required in the catchments by 2031

Area	Occupation	Growth to 2031	Retiring 2021 to 2031	Total new workers by 2031
Peel catchment	RN	190	62	252
	EN	105	27	132
	SW	786	538	1,324
	Total	1,082	627	1,709
Secondary catchment	RN	566	139	705
	EN	291	66	356
	SW	3,080	974	4,054

Area	Occupation	Growth to 2031	Retiring 2021 to 2031	Total new workers by 2031
	Total	3,937	1,178	5,115
Total catchment	**RN**	**756**	**201**	**955**
	EN	**396**	**92**	**488**
	SW	**3,866**	**1,513**	**5,352**
	Total	**5,018**	**1,806**	**6,795**
WA	**RN**	**2,789**	**790**	**3,579**
	EN	**1,479**	**364**	**1,843**
	SW	**13,530**	**5,883**	**19,414**
	Total	**17,798**	**7,038**	**24,836**

Source: Aggregation of Table 19, Table 20 and Table 21 (see notes on each table)

Allied health workforce

In addition to the workforce comprising of RNs, ENs and PCW/SW there will also be demand for an increased allied health workforce. It is estimated that by 2031 the increase will be as follows:

- Peel catchment: an additional 413 practitioners +94.3% 2021 to 2031
- Secondary catchment: an additional 517 practitioners +36.2% 2021 to 2031
- Total catchment: an additional 930 practitioners +49.8% 2021 to 2031

Note: this workforce requirement is not exclusively for aged care. This is a calculation for all age groups and care needs.

Training the aged care workforce

High current and future demand for training

The only part of the aged care workforce with mandated qualifications is the requirement to have RNs and for providers to ensure that other clinical care is provided by a person with the appropriate qualification to support the clinical need being addressed.

The bulk of the aged care workforce therefore does not require a qualification. The onus sits with the aged care provider to ensure that the appropriate care is being provided and that the care is provided by people with appropriate qualification and skills. The degree to which this obligation is being met is audited by Aged Care Quality and Safety Commission. There is no clear indication from the Commonwealth Government if this situation will change when the new Aged Care Act is brought into law. An exposure draft will not be available until later in 2023.

The number of personal care and support workers holding a Certificate III or higher in a relevant direct care field:

- Residential aged care: 66%
- HCP: 63%
- CHSP: 71%

The data suggests that there is a significant growth opportunity in supporting a change in practice and in relation to training the existing care workforce and a very substantial demand for training to support new workers. In addition, in-service training, professional development and training related to achieving higher qualifications all represent opportunities for training in aged care.

The Aged Care RN workforce will need to increase in WA by 3,579 (955 in the catchments) necessitating a substantial increase in the university places. Given the lead time of at least 4 years to complete a bachelor of nursing, action is required immediately. The other key focus will be to support the current Support Worker and EN workforce to achieve higher qualifications and credentials.

Investment into building the workforce

The WA and Commonwealth Governments have made significant investment into the VET sector to improve the quality and consistency of training and to attract more applicants and graduates including initiatives such as Fee Free TAFE. The most costly and significant initiative is the 15% increase in wages for the aged care frontline workforce (effective July 2023).

Current training service system

The VET service system supporting the catchments includes both TAFEs and RTOs. There eight providers with a physical presence in the catchments (four each in Peel and the secondary catchment). Many more RTOs provide fully online VET training into the catchments; theoretically these providers could be anywhere in Australia; as such, online providers have not been included in the service mapping.

Consultations and other Research Findings

To augment the consultations, corroborating evidence and extended narrative from the literature has been included where FMA considers that this evidence adds to the particular theme being explored through the consultations.

Consultations

Consultations were conducted with 22 stakeholder organisations representing government, providers, peak/sector body, university and the VET sector. A further 14 aged care workers provided feedback.

Workforce shortages

All respondents identified that workforce shortages were currently a significant factor impacting/limiting service delivery and the shortages will be a factor influencing the capacity to grow into the future. In addition respondents identified more acute problems in rural areas and regional towns. One respondent stated that “Many RAC beds around Mandurah are closed due to lack of workforce”.

In the catchment, two providers (Amana Living and Coolibah Care), have active recruitment and training initiatives to address residential aged care workforce shortages enabling sufficient workforce capacity to meet requirements. Community care however remains particularly problematic for all those consulted, as does limited access to allied health professionals.

Skilled migration to address gaps

Skilled migration isn’t a simple solution as there a number factors and dynamics that have to be considered including factors that impact the viability of this solution. Key factors cited include; English proficiency, lack of appreciation of Australian culture, pre-screening for suitability and a lack of key worker housing.

Quality of training

VET Training - Common to all respondents was the view that Certificate training was of an inconsistent quality. One respondent stated that “they arrive with a Cert III and then the training begins” and “the poor preparation is a particular problem in community care as the workers are deliver the service independently”.

RNs - Broadly there is a recognition that RNs entering aged care would benefit from course work that includes geriatric competencies (dementia care, behavioural management, older person’s mental health and psychiatric care), preparation for the leadership and management roles and the more independent working environment (lesser role for peer support and resultant professional development).

ENs - There was a universal view that career pathways are important particularly EN to RN. However respondents also cautioned that a career pathway is not desired by all ENs. Some love their current work/role or feel that they may not be capable of upgrading their qualification to RN.

In-service training

In-service and professional development is managed internally and externally by providers according to the perceived needs of their staff, funding that supports a particular training initiative and (for some) a structured approach to training. Interestingly no provider mentioned that training responded to identification of needs as a result of their Quality Management System (QMS).

Training drop-out rates

At project commencement a drop-out rate of 27% of candidates for Cert III was identified as a concerning factor. Mitigation for drop outs were identified as; improved screening, pre-qualifying course work as part of a screening strategy, and improving the integrity of the Vocational Education and Training (VET) sector.

Need to change the perception of aged care

A common theme addressed by respondents when discussing aged care workforce shortages was the need to change the perception of potential employees with regard to working in aged care. The response indicates the view that the current perception is a barrier to people entering the sector.

Technology

Respondents had a limited perspective relating to the application of technology and how it might change the workplace and/or respond to particular workforce issues. Back of house IT systems offer the greatest opportunities for improving efficiencies. The benefits of AI are not well understood, with AI generally seen as the unacceptable replacement of human connection.

Centre of Excellence in Mandurah

The concept of a Centre of Excellence in Aged Care Training was universally positively embraced as an opportunity to:

- Improve the quality of training
- Ensure training is meeting the particular needs of the sector
- Manage the sheer volume of need relating to the ageing population
- Bring together universities, VET sector, funders, providers, people with a lived experience, policy and research

As such, there was a strong interest in how the vision of the COE would come together and who the partners might be. South Metro TAFE hosts ACEPT (Australian Centre for Energy and Process Training) a world-class, specialist training facility aligned with training requirements of the oil and gas, processing and resources industries.[4] South Metro TAFE have proposed that the ACEPT model may aid development of this initiative and accordingly invited the consultants and project management team to inspect ACEPT. South Metro TAFE identified the governance of ACEPT to be an essential factor in its success.

Many of the respondents lit up with creative ideas about the elements that could be included in a COE and the issues/problems that could be addressed through a COE based in Mandurah.

Aged Care Training Centre of Excellence

Definition

A Centre of Excellence (COE) is a model or concept that is widely used and applied across many different sectors and Industries. A COE is a typically small team of dedicated individuals managed from a common central point, separate from the functional areas that it supports within an area/field of practice, sector or organisation.

The focus of a COE may be to provide leadership and the bringing together knowledge and expertise. Commonly the COE addresses complex issues through drawing on evidence, applying new thinking, co-design and design thinking. A COE will test, demonstrate and rapidly and flexibly redesign (prototype) to support the adoption of practices that solve the complex issues or improve current practice.

[4] https://www.southmetrotafe.wa.edu.au/specialist-training-facilities/acept

A COE is characterised by collaboration, research, knowledge and skills transfer and leading practice (nationally and internationally). This may include facilitating, demonstrating and promoting the adoption of:

- New technology or technology tools
- New solutions techniques or practices
- New research and practice applications

Knowledge transfer is an essential element of a COE. Advancing the new practice therefore requires education and skills transfer to deliver the; broad change, transformation or improvement.

The Mandurah COE Model

We propose that the Mandurah COE model be co-designed with the key stakeholders using the following key outcomes and model elements as guidance. These outcomes and model elements have been forged giving consideration to the scale of need and the issues that will have to be addressed to ensure that aged care has a workforce of the quality, qualifications and quantum required by 2031. The COE will create an opportunity to use the Stanford University developed concept for large-scale social change that requires broad cross-sector coordination; Collective Impact.[5]

Key desired outcomes of the State-wide Aged Care Training COE:

- Improve the quality/job readiness of graduating students so their training and qualifications are matched to the requirements of the workplace
- Increase the number of Aboriginal aged care workers (RNs, allied health, ENs, support workers, personal care workers)
- Deliver training for new practices and the adoption of new technology focused on efficiency and effectiveness
- Create and promote a new vision for a rewarding and attractive career in aged care (includes engagement with secondary school students)
- Create opportunities for real world experiences (work place and simulated work place) that are central to training and assessments
- Affect policy and funding priorities to ensure that workforce planning and initiatives to recruit the quantum of suitable candidates can be achieved (including skilled migration initiatives, the development of cross cultural workers, the development of an Aboriginal workforce)
- Affect policy and funding to ensure that the quantum of training facilities, modes of training and the quantum and quality of trainers can be delivered to meet the demand for training
- Build cross sector participation and innovation to aid in the transformational reforms of Aged Care that includes: Architects, technology, manufacturers, developers, business strategists
- Promote innovation and leading practice that is adopted state-wide

To achieve these outcomes the key elements of the Aged Care Training COE should include these elements:

- Brings together: Experts/researchers in aged care (includes subject matter expertise such dementia, behaviour management), education (University and VET), Providers (Community and Residential Aged Care), Funders (includes Government), Government (as Policy Makers), Economists, Technology, People with lived experience, Cross sector participants
- Co-design with Aboriginal people how the COE will build Aboriginal Aged Care workforce

[5] Kania J & Kramer M (2011). Collective Impact. Stanford Social Innovation Review, 9(1)

- Leadership to create the scope of the model, manage the business of the COE and maintain the integrity of the model and the related roles of the COE to achieve the outcomes sought
- Leadership that brings all the stakeholders together including; 'beneficiaries and customers'
- Development/implementation of a measurement and evaluation framework connected to continuous quality improvement
- Ownership or buy-in to the COE from critical partners – potential through the creation of a cooperative model of ownership
- Creates opportunities for partners to develop demonstration sites and examples of leading practice and innovation that could be scalable or replicable. This approach promotes the adoption of innovation through developing the next generation of managers, nurses and clinicians and would build a positive image of aged care. In addition, exposure to innovation would allow VET students to build skills and an outlook supporting the wide scale adoption of innovations suitable to scale up.
- Use the breadth and creativeness of the innovations at the COE and in real world demonstration site a strong point of difference to attract student nurses , allied health students, technology and managements students from across WA and Australia to participate in the training programs of COE

Conclusion

This Needs Analysis demonstrates a very strong need and a high level of interest in a Centre of Excellence in Aged Care Training in Mandurah. The study finds a Centre of Excellence in Aged Care Training could increase workforce and workforce quality through the following solutions:

- Improving retention of the existing workforce (RNs and Support Workers) through preparing RNs not only for their clinical roles but also for the leadership and management roles required in aged care by including leadership and management in the core course work or Post Graduate studies for RNs
- Increasing the nursing workforce through; more accessible EN to RN transition pathways;, designing better tertiary courses (Bachelor of Nursing, Bachelor of Science (Nursing)) to aid RNs to make choices to enter the aged care workforce; improved work placement practices
- Increasing RNs in residential aged care will reduce long stay patients in hospitals leading to higher occupancy rates in residential aged care and the related improvement in financial performance of Providers. Increasing supply of appropriately skilled RNs in residential aged care will also enable Providers to more confidently develop the new facilities required across WA with a resultant investment of up to $3.1B
- Increasing RNs in residential aged care will also reduce the very significant cost burden to the WA Government related to long stay patients who are unable to be discharged to residential aged care
- Lifting the quality and processes related to the VET sector, building on best practice examples particularly increasing the capacity for student placements, limiting digital only models, supporting the development of VET trainers with real industry experience, consistency in relation to the course material, including the industry requirements into the training and assessment standards
- Increasing completion rates in VET courses through improved pre-qualification and improved student support during training
- Targeted skilled migration – connected to VET training initiatives and integrated/aligned with providers' needs
- Developing place-based initiatives (community and providers) that the COE could facilitate
- Planning, evaluation and research that is integrated with recruitment, training and retention
- Improved pre course screening processes to aid completion rates
- Incorporating technology and research into the CEO to promote the adoption of leading practice

- Incorporating exemplars of leading and innovative practice into the COE as a competitive advantage to attract high quality candidates for training and to lift the desirability/quality of graduates to the Industry

- To create simulated (actual and virtual) environments for assessing competencies particular for VET students working in Home Care environments

- Creating a living lab that brings together lived experience, trainees/students, industry, industry partners, research

FMA considers that the proposed WA Aged Care Training Centre of Excellence presents an opportunity to improve economic activity in the City of Mandurah and broader Peel region based on three major themes:

- The significant benefits in direct aged care employment in the primary catchment

- The economic activity associated with training and professional development across the catchments

- Aged care providers targeting the catchments as viable locations for service development and expansion (estimated value $1.1B by 2031)

Yet to be determined: what a COE is, who should partner the COE initiators, the business case, the economic benefit and infrastructure needs.

While there are potential inclusions and cross-over areas of workforce development and drivers of demand, FMA conclude that the sheer size of the need based on aged care is sufficient to justify undertaking a Feasibility Study. The cross-over may be more relevant when the vision of the COE is fully formed. The Feasibility Study, Business Plan and related risk assessment will discuss inclusions, cross-over and the potential risk for the three major care workforce sectors (health, NDIS/disability and aged care) to cannibalise each other, to the detriment of all.

1 Project Introduction

He who would pass his declining years with honour and comfort, should, when young, consider that he may one day become old, and remember when he is old, that he has once been young.

Joseph Addison 1672 – 1719

1.1 Project Overview

Context and rationale

Mandurah, in the Peel region is located 75 kilometres south of Perth with a population of around 150,000. Five local government areas comprise the region: the City of Mandurah (COM) and the Shires of Boddington, Murray, Serpentine-Jarrahdale and Waroona. Peel is one of the fastest growing regions in Western Australia.

COM is implementing the Transform Mandurah Program - a disruptive program to support economic growth, diversification and job creation as well as expand educational opportunities and quality of living options for residents.

Deloitte Access Economics was engaged by COM to undertake economic analysis to support the identification of opportunities to pursue, challenges to address, and actions to undertake. Deloitte's 2022 report "Mandurah's Economic Opportunities" identified eight high-level opportunities for Mandurah's future economic development in the medium to long term:

1. Make Mandurah the Lifestyle Capital of Western Australia
2. Develop Mandurah into a World-Class Hospitality Education Precinct
3. Build the Capacity of the Aged-Care Workforce
4. Make Mandurah a Hub for 'Blue Collar Tech' Training and Industries
5. Innovation in Healthcare Delivery
6. Innovative Social Interventions
7. A Hub to Lead Industry Decarbonisation and Climate Resilience and Adaption Strategies
8. Develop a Strong Base of Professional Workers in Mandurah

Nearly 27 per cent of Australia's population (8.1 million people) are expected to be aged over 60 years by 2040, representing a rise of 46 per cent from 2020 – or 2.6 million more people.

Locally, the Mandurah population aged 60 years and older is forecast to reach 40,279 by 2036, representing 33% of COM's total resident population.

The aged care (and health) industry is a major employer in many parts of the State and in particular the Peel region, with a diverse workforce and a significant contribution to the economy. Aged care consumers are diverse in age, cultural backgrounds, support structures and often have complex health needs, managing multiple chronic conditions. This complexity is set to increase into the future with people living longer and often entering the in-home or residential care system later in life with increasingly high care needs. Through this initiative, COM will provide a leading role in expanding, innovative, future proofed training to address significant

forecast shortages of skilled labour in the aged care sector, initially within the region, leading to supporting the sector statewide. Although this initiative has the focus of aged care, it is noted that there may be potential inclusion / cross-over of staff and nurse training in the NDIS area.

Scope

The scope of works includes two phases: i) Needs Analysis and ii) Feasibility Study on establishing a Western Australia (WA) Aged Care Training Centre of Excellence (COE), located in Mandurah, to build the capacity of the State's aged care workforce.

The COE does not necessarily have to be a new build facility, it could utilise an existing facility or could incorporate a network of smaller new / existing facilities, either public or private, or a combination of both, depending on the most optimal model.

1.2 Needs Analysis Objectives

The objective of the Needs Analysis is to quantify the estimated demand for a WA Aged Care Training Centre of Excellence to deliver all levels of aged care workforce training required for the industry in WA.

It is noted that the Needs Analysis process may not identify a need for the proposed WA Aged Care Training Centre of Excellence. In this case, the project will be terminated at completion of this stage.

Key considerations to determine if there is a case to proceed to the Feasibility Study include:

- The current and projected quantum of need for a trained and qualified aged care workforce in WA
- The extent to which current training providers can/do supply the required volume of aged care workers (demand)
- The extent to which current training providers can/do supply appropriately skilled aged care workers (quality)
- Could the proposed Statewide Aged Care Training Centre of Excellence deliver improved outcomes (supply and quality of aged care workforce)? Increase the number completions
- Does the proposed Statewide Aged Care Training Centre of Excellence present an opportunity to improve economic activity in the Peel region (City of Mandurah)?

1.3 Methodology

The Needs Analysis incorporates a number of stages as outlined in Figure 1. These stages were designed to provide corroborating evidence/findings from data, literature and consultations. The method supports the development of evidence to enable the quantification of estimated demand for a WA Aged Care Training Centre of Excellence to deliver all levels of aged care workforce training required for the industry in WA. Key elements identified in Figure 1 include:

- Conducting a desktop review with stakeholder input, to quantify the demand needs and projections for a WA wide workforce training COE, including the identification of which areas of WA, from which the majority of students would access the COE
- Outlining why such a COE is needed for WA and why it could deliver improved training outcomes for the aged care sector in WA, compared to the current arrangements and offerings.
- Outlining how the need for the COE fits with local / regional and State priorities

The multiple sources used in the Needs Analysis enable findings to be triangulated and confirmed, providing the reader with greater certainty regarding the veracity of the findings. The Needs Analysis has also provided reliable evidence upon which the proposed feasibility can be conducted if this study is warranted.

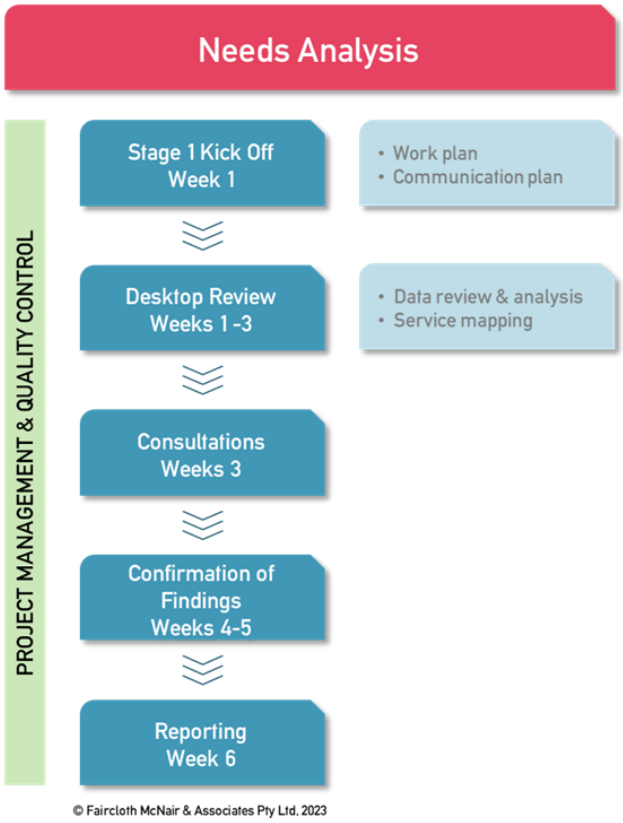
The Needs Analysis theorised that the viability and need for WA Aged Care Training Centre of Excellence could be determined using two primary lenses:

- The quantum and categories of workers who will need to be trained to meet the demand for an aged care workforce
- The quality of training that is required to support provider and consumer needs and that meet the requirements of the funding bodies and the Aged Care Act

Accordingly the study included the identification of:

- A primary, secondary and whole of WA catchment for services
- The current and future population of older persons, exploring the relationship between age structure and demand for services
- The current and future supply and demand for aged care services, types of services and capital investment required
- The current and future workforce categories and quantum of workers required to meet demand
- The supply, demand and quality of training and capacity to meet future needs
- Initiatives that will/are responding to the training needs of providers
- Elements that may be included or required in a Centre of Excellence including the suitability of Mandurah as a location for a Centre of Excellence and potential partners
- Workforce shortages and initiatives that may respond to demand including immigration and technology

Figure 1: Needs Analysis method map



The Needs Analysis documents the evidence relied upon and accompanying analysis and implications in a report.

2 Data and Literature Research

2.1 Demand for Aged Care Workforce

Workforce demand driven by aged care service growth

Access to and use of aged care services will directly drive demand for a suitably qualified and trained aged care workforce. Evidence and analysis in this section will be relied upon to calculate the number of new workers requiring training, and the type of training and qualifications required. Additional analysis will quantify the number of workers required to replace retiring workers.

The Australian Treasury's 2023 Intergenerational Report states:

> "Demand for care and support services is expected to rise over the next 40 years as the population ages, particularly the growing population of over 85-year-olds. Currently, people aged 65 or older currently account for around 40 per cent of total Australian health expenditure, despite being about 16 per cent of the population. Governments have expanded access to formal care arrangements for children, the aged and people with disability. Standards of care and support have also improved with the shift to consumer-centric models of service provision, stronger regulations, and better pay and conditions for workers. A care and support workforce twice the size it was in 2020–21 could be needed to meet demand in 2049–50. This presents strong future job opportunities, but is a workforce planning challenge. Appropriate skills and training pathways, plus wages that reflect the value of care work appropriately, will be critical to encourage workers to join and stay in the care and support sector." [6]

The service demand will not be a short-lived phenomenon but will continue over coming decades. The study documents demand based on published demand estimates to 2031.

2.2 Study Area

Demographic information forms the foundation for analysing current and future demand for aged care services. The demographic information, accompanying research and analysis focuses on primary and secondary catchments and WA in total.

The project is investigating a potential COE based in Mandurah; as such the primary catchment for analysis is the Peel Region.

A secondary catchment based on the South West Region and the metropolitan LGAs that abut the Peel Region (Kwinana and Rockingham) has also been defined and included in this study. The intention is that the COE will be established in Mandurah and over time will service the geography beyond the Peel Region.

For the Needs Analysis, data has been reported based on the primary (Peel region) and secondary catchments. The secondary catchment is reported based on the natural areas that a COE in Mandurah is likely to service given transport routes and historic service relationships with adjoining regions.

Figure 2: Needs Analysis catchments

[6] Treasury (2023). Intergenerational Report 2023: Australia's future to 2063. Australian Government, Canberra, p 8

The Peel Region is substantially a part of the Commonwealth South West Metropolitan Aged Care Planning Region (ACPR). The Shire of Boddington is part of the Commonwealth's Wheatbelt ACPR and Serpentine-Jarrahdale is part of the Metropolitan South East ACPR. Data tables support comparison to Perth metropolitan ACPRs to support insight into the deviations in the catchment relating to the dimension of need and the drivers influencing the data.

2.3 Catchment – Potential Students

Geography and Transport

The catchments also define the area from which the majority of students will be drawn.

Particular dynamics that support Mandurah include public transport (rail link to Perth and bus links to the South West) and an excellent road network. Mandurah as a large Regional centre already acts as a service centre to rural towns and locations to the South. This existing role as a service centre and transport links contribute to the catchment rationale. The catchment has well developed TAFE and other VET Training. There is also a University Campus of Murdoch University located in Mandurah that includes Nursing Simulation suites to support RN education and skill development as part of Bachelor of Science (Nursing) and related post graduate studies. Edith Cowan University has a Campus located in Bunbury offering a Bachelor of Science (Nursing).

Current VET enrolments and projections

DWTD produced specific data for the project that enable analysis of current VET enrolments in SW and Peel. The Data was also provided at State level data that supports comparison of enrolments in the catchments compared to the State. A particular focus was aged care training delivered by TAFE and RTOs. The competencies are CHC33015 Certificate III in Individual Support [Ageing], Certificate III in Individual Support [Ageing, Home and Community] and also CHC43015 Certificate IV in Ageing Support. The data includes all courses where a Government subsidy was claimed by the training provider regardless of where the Provider is headquartered. Key insights included for 2022 and 2023 are:

- Peel and SW Regions had a higher proportion of enrolments (compared to the working age population) in these VET courses than WA enrolments (when compared to the WA working aged population):
    - Cert III in 2022 was 26.4% higher per capita and in 2023 36.8% higher per capita in Peel/SW
    - Cert IV in 2022 was 44.0% higher per capita and in 2023 41.9% higher per capita in Peel/SW
- Completion rates suggest that in WA and in the catchments there will be insufficient direct support workers with qualifications to meet the demand for these workers by 2031. This is due to very poor completion rates. DWTD suggested that it is difficult to make direct comparisons as some data may be missing and some enrolled students may be completing their training over a longer period. With these caveats in mind the completion rate for 2022 was less than half for WA and Peel/SW. This outcome is supported by the insights in call out box.

Consolation feedback from TAFE provided the following insights:

- Mandurah campus – low enrolment numbers and very few students continuing. At this stage we started with 12 students and only have 2 students who have started work placement at this time. Reasons for the drop off /withdrawals have included:
    - Students not meeting or willing to undertake the COVID vaccination scheduled required by industry. Students had completed all theory.
    - Several students withdrawing due to personal reasons and not related to the course in any way
    - Change of career – student wanting to work in education
    - Health reasons

  Note: All responses from students indicated external reasons or realisation that aged care industry is not for them.
- Rockingham Campus; higher numbers for enrolment than Mandurah (21) however only 12 students have started work placement this week. Similar response to not continuing as Mandurah students including:
    - Students not realising the level of work that is expected as per the qualification and units of competency.

Based on the data relating to enrolments it is reasonable to conclude that Peel and SW will continue to attract proportionately higher enrolments in VET than WA as a whole. The significant issue is the completion rates are too low to ensure the DSW workforce required by 2031.

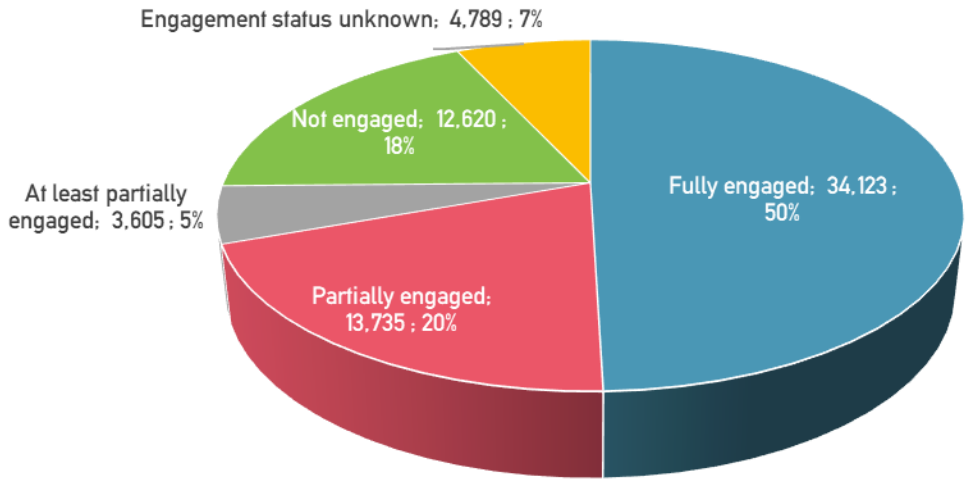
RN Training

With regard to training of RNs for a career in Aged Care there are additional opportunities to attract interest from across WA and even from Interstate. There are existing Universities with particular focus on aged care that attract students to qualify as an RN or undertake professional development who draw students from across Australia such as; University of Tasmania (dementia care expertise) and the University of Wollongong (UOW).

2.4 Unemployment and Underemployment in Peel

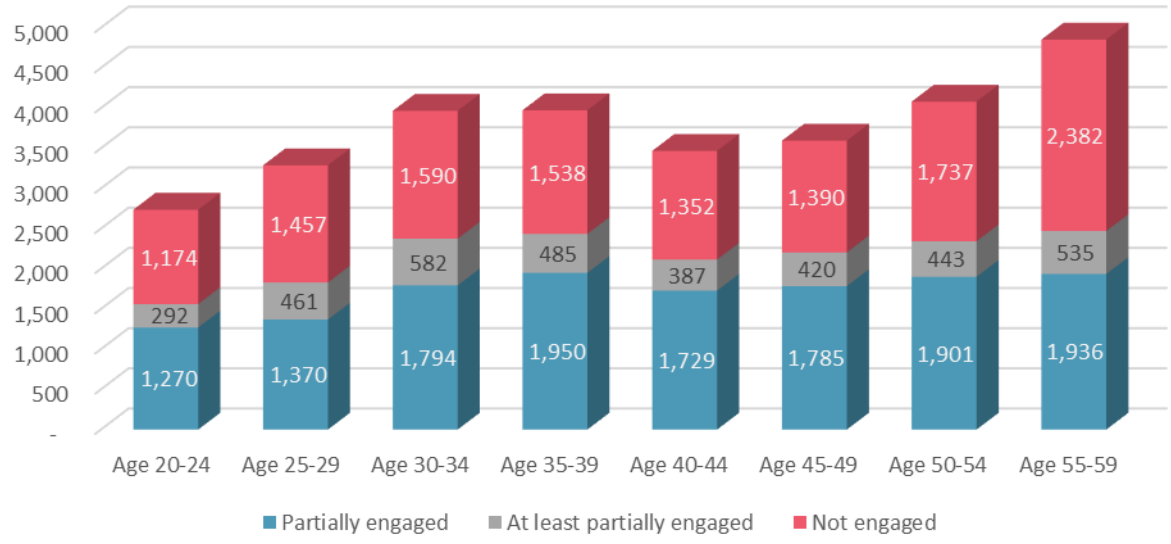
The following summary of the Peel Region provides some insight into the opportunity to recruit and train a workforce from within the primary catchment. Figure 3 and Figure 4 provide insight into the proportions of partially employed, underemployed and unemployed in the Peel Development Commission catchment. In addition Figure 5 provides insight into unemployment.

Figure 3: Peel population aged 50-59 years reporting engagement in education & employment (2021)



Source: ABS Census of Population & Housing 2021

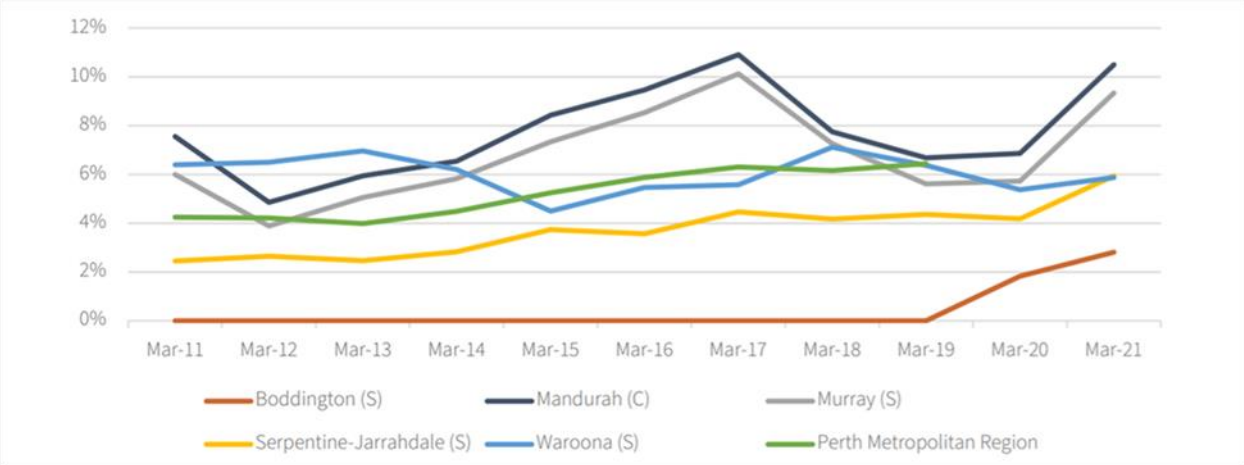
Figure 4: Peel population aged 20-59 years reporting less than full engagement in education & employment by age (2021)



Source: ABS Census of Population & Housing 2021

Data demonstrates that the unemployment rate for Mandurah and Murray has remained high in comparison to Perth Metro, Boddington and Serpentine-Jarrahdale since 2015.

Figure 5: Unemployment in Peel catchment



Source: Peel Development Commission & Peel Capability Collaborative (2021). The People of Peel Human Capital Insights Report

Barriers to engagement for those people who would be willing to increase their hours of employment or to seek employment in aged care are drawn from FMA consultations conducted nationally, spanning metro, regional, rural and remote areas. Barriers include:

- Role as a family carer
- The high cost of child care
- A perception that limited/lack of skills or education are a barrier to employment
- A poor image of aged care (unappealing)
- A lack of understanding of the broad range of jobs and that aged care is more than residential aged care
- A lack of understanding relating to their training and education options and the support offered to undertake study
- Concerns (real or imagined) that they won't meet the character test

This study identifies that in the population aged 55 to 69 years that more than 20% are family carers and therefore are either unable to work or have restricted time available for employment.

2.5 Population of Potential Aged Care Users

2.5.1 Census analysis

The Australian Bureau of Statistics (ABS) conducts a Census of Population and Housing (Census) at five year intervals, the most recent being undertaken in 2021. The Census provides data relating to the profile of current and/or potential future users of aged care services. Analysis of the 2021 Census has been organised into three age categories across the primary and secondary catchments. The three categories are:

- 55+ years: identifies people eligible to enter retirement living and is commonly used to create formulas for estimating demand for retirement living. This age classification can also provide insight into the potential demand for aged care in horizons beyond the published population estimates.

- 70+ years: used by the Commonwealth to develop demand estimates and to allocate funding for aged care services. The age category of 65+ years may be discussed by some commentators as 65 is the age at which a person is no longer eligible to receive new NDIS supports, however a person younger than 65 years may be eligible for aged care. For the purpose of establishing demand we have used the 70+ category.

- 85+ years: identifies the population cohort with very high demand for aged care services. In Perth's Metropolitan South West ACPR (encompasses part of the Peel Region) the average age of entry into:

    - residential aged care in the year 2021-2022 was 85.2 years and similarly in the country South West ACPR the average age at entry was 85.0 years

    - home care in the year 2021-2022 was 83.0 years and similarly in the country South West ACPR the average age at entry was 82.3 years[7]

Census data reported in Table 6 identifies characteristics of the primary and secondary catchments and their constituent LGAs and sub regions and incorporates WA as a whole. Key findings are that the primary catchment is a structurally older population than Metro Perth. The proportion of the population now 55 years of age will drive demand well beyond the planning horizon of 2031 addressed in this report. Table 6 demonstrates that the age structure of Metro Perth and WA as a whole broadly correlate.

Table 6: Catchment older age structure by; LGA, Catchments, Perth Metro and WA

Area	Age 55+	% of total population	Age 70+	% of total population	Age 85+	% of total population
Boddington LGA	568	33.3%	188	11.0%	22	1.3%
Mandurah LGA	35,035	38.8%	16,836	18.6%	2,712	3.0%
Murray LGA	6,841	37.9%	3,086	17.1%	407	2.3%
Serpentine-Jarrahdale LGA	6,714	20.9%	2,163	6.7%	246	0.8%
Waroona LGA	1,691	39.9%	716	16.9%	105	2.5%
Primary catchment	**50,849**	**34.7%**	**22,989**	**15.7%**	**3,492**	**2.4%**
Augusta Margaret River LGA	5,173	30.8%	1,911	11.4%	285	1.7%
Boyup Brook LGA	733	40.0%	311	17.0%	40	2.2%
Bridgetown-Greenbushes LGA	2,342	44.7%	963	18.4%	102	1.9%
Bunbury LGA	11,446	34.7%	4,994	15.1%	968	2.9%
Busselton LGA	14,869	36.6%	6,752	16.6%	1,045	2.6%
Capel LGA	4,862	26.8%	1,624	8.9%	135	0.7%
Collie LGA	3,276	37.2%	1,323	15.0%	181	2.1%
Dardanup LGA	4,542	30.9%	1,970	13.4%	349	2.4%
Donnybrook-Balingup LGA	2,572	41.8%	1,026	16.7%	129	2.1%
Harvey LGA	8,704	30.5%	3,323	11.6%	404	1.4%
Nannup LGA	801	52.1%	345	22.4%	30	2.0%
Manjimup LGA	3616	39.6%	1,423	15.6%	232	2.5%
South West (Rural) total	62,936	34.1%	25,965	14.1%	3,900	2.1%
Kwinana LGA	8,578	18.7%	2,896	6.3%	420	0.9%

[7] AIHW GEN Data: Admissions into aged care by ACPR (age and sex) 2022-21-19

Area	Age 55+	% of total population	Age 70+	% of total population	Age 85+	% of total population
Rockingham LGA	34,758	25.6%	13,368	9.9%	2,083	1.5%
MSW Targeted LGAs total	43,336	23.9%	16,264	9.0%	2,503	1.4%
Secondary catchment total	**106,272**	**29.0%**	**42,229**	**11.5%**	**6,403**	**1.7%**
Total catchment	**157,121**	**30.7%**	**65,218**	**12.7%**	**9,895**	**1.9%**
Perth Metro	**575,948**	**27.1%**	**233,564**	**11.0%**	**40,851**	**1.9%**
WA	**742,710**	**27.9%**	**296,627**	**11.1%**	**50,133**	**1.9%**

Source: ABS Census of Population and Housing, 2021

2.5.2 Characteristics of the Aged Population

Aboriginal and/or Torres Strait Islander population

The Peel Region has 1,329 Aboriginal and/or Torres Strait Islander persons 50+ years (2.2% of the 50+ population). The 50+ Aboriginal and/or Torres Strait Islander population may need to access aged care services at a much younger age than the broader population. The Commonwealth planning for aged care services is affected by this factor.

The secondary catchment has 6,133 Aboriginal and/or Torres Strait Islander persons residing in the catchment; 4.7% of the 50+ population.

Language other than English (LOTE) Spoken at Home

The Peel Region aged population includes people who speak a language other than English at home. LOTE characteristics are:

- 6,513 persons aged 55+ years, comprising 12.8% of the 55+ population
- 2,424 persons aged 70+ years, comprising 10.5% of the 70+ population
- 637 persons aged 85+ years, comprising 18.2% of the 85+ population

Similarly secondary catchment LOTE characteristics are:

- 15,834 persons aged 55+ years, comprising 14.9% of the 55+ population
- 4,933 persons aged 70+ years, comprising 11.7% of the 70+ population
- 1,053 persons aged 85+ years, comprising 16.4% of the 85+ population

Language spoken at home is strong indicator of need for staff who are matched to culture and language. The high incidence of dementia in the 85+ population may also result in affected individuals losing spoken English skills.

The Peel Region's population aged 70+ years from a non-English speaking country of birth is diverse, with 60 countries represented. The top ten non-English speaking countries of birth are: Netherlands (410), Germany (257), Italy (248), India (127), Malaysia (55), Zimbabwe (53), Philippines (47), Croatia (37), Austria (36), and Singapore (36).

Carers

A carer is a person who provides unpaid assistance to a person with a disability, health condition, or due to old age.

The age profile of carers is an important aspect of appreciating the impact of caring on the potential workforce and the role the availability of carers has on the capacity of people with high needs to remain at home. In the early national trial of "high care at home" dementia packages (EACH dementia packages; now level 4 HCP with dementia supplement) there was a single recipient eligible for the package who did not have a live in carer in the two year trial. It can therefore be concluded that high care at home, where there are significant behavioural issues, can only be sustained where a carer is available regardless of people's preference to remain at home.

Table 7 details that the primary and secondary catchment has in excess of 1 in 5 persons 55 to 69 who are carers. This is factor that will limit these persons participation in the workforce. This a significantly higher figure than WA as a whole.

Table 7: Carer population 2021 Census

Area	50-69*	% of total Population 50-69	70+	% of total Population 70+	85+	% of total Population 85+	Total	% of total Population 50 +
Peel catchment	5,900	21.2%	2,533	11.0%	283	8.2%	8,716	17.1%
Secondary catchment	14,035	22.5%	4,466	10.9%	342	5.5%	18,843	18.2%
Total catchment	**19,935**	**22.1%**	**6,999**	**10.9%**	**625**	**6.4%**	**27,559**	**17.8%**
WA	**73,645**	**16.5%**	**32,507**	**11.0%**	**3,436**	**6.9%**	**106,152**	**14.3%**

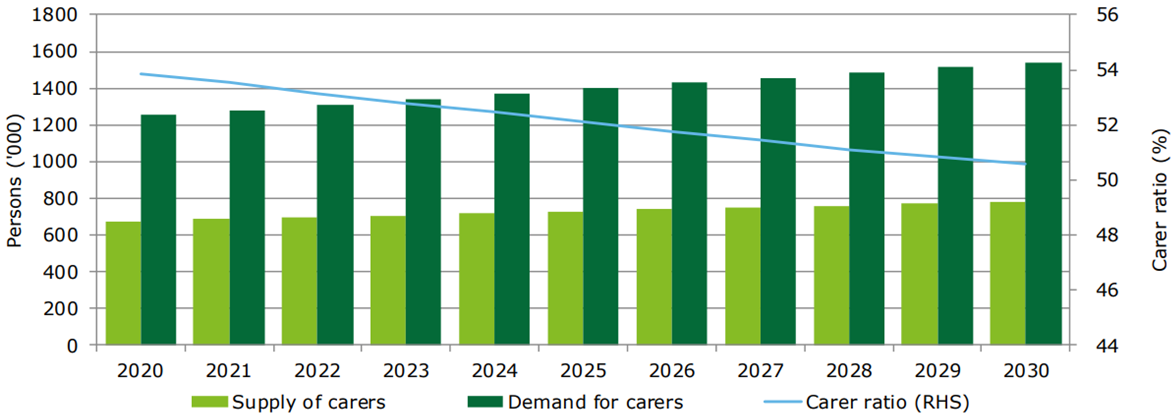
Source: ABS Census of Population and Housing, 2021

*Working Age Carers

The lack of a carer and escalating care needs is likely to trigger the need for a person to move to Residential Aged Care from Home Care. 61.3% of HCP recipients exited to Residential Aged Care, 38.2% to death (the balance to hospital) in 2021-22.[8]

As detailed in this Needs Analysis, Residential Aged Care is reliant on a much larger workforce than community care (HCP and CHSP). Figure 6 details the increasing requirement for carers and a proportional decline in the availability of carers.

Figure 6: Carer supply and demand (national)



Source: Deloitte Access Economics (2020). The Value of Informal Care in 2020.

2.5.3 WA Tomorrow Population Projections – Band Selection

WA Tomorrow population projections are relied upon by WA State Government, Regional Development Commissions and Local Governments as an essential planning tool. The latest WA Tomorrow projections are based on the 2016 ABS Census, with updates based on the 2021 Census not yet released. Therefore, to ascertain the most suitable projected growth Band for the catchments, 2021 Census population figures have been compared to the WA Tomorrow population projection for 2021. The outcome is detailed in the following tables.

[8] AIHW GEN Data: People leaving aged care – Reason for Leaving Aged Care , Number of exits by care type and discharge reason 2021-22

Table 8: Primary catchment 2021 Census compared to WA Tomorrow projections

Data Source	Age 55+		Age 70+		Age 85+	
Peel Census 2021	50,849	33.3%	22,989	11.0%	3,492	1.3%
Peel WA Tomorrow Band B 2021	47,050	22.0%	20,135	9.6%	3,290	1.6%
Peel WA Tomorrow Band D 2021	48,635	22.6%	21,015	9.8%	3,405	1.6%
Peel WA Tomorrow Band E 2021	50,785	22.6%	22,070	9.8%	3,715	1.7%

Source: ABS Census of Population and Housing, 2021 and WA Tomorrow Population Projections Report 11 Bands B, D & E, 2021

Table 9: Secondary catchment 2021 Census compared to WA Tomorrow projections

Data Source	Age 55+		Age 70+		Age 85+	
Census 2021	106,272	23.9%	42,229	11.5%	6,403	1.7%
WA Tomorrow Band B 2021	101,490	26.7%	39,270	10.3%	6,015	1.6%
WA Tomorrow Band D 2021	105,910	22.9%	41,520	10.6%	6,395	1.6%
WA Tomorrow Band E 2021	110,645	27.1%	43,840	10.7%	6,855	1.7%

Source: ABS Census of Population and Housing, 2021 and WA Tomorrow Population Projections Report 11 Bands B, D & E, 2021

Application of the WA Tomorrow projections

The comparison supports the use of Band D to assess the future aged populations in the primary catchment and secondary catchments. However the Band D projections are likely to be conservative as they underestimate some metrics such as Mandurah's 70+ population. However for the overall estimate for the demand for aged care services and the employment that aged care service provision will generate we consider the Band D release to be the appropriate model.

2.5.4 WA Tomorrow Population Projections

The key findings from the population projections are that the primary and secondary catchments for a COE will continue to experience strong demand into the future with very strong growth in the population aged 85+ years. The growth in these catchments is greater than the high growth that will also be experienced across WA. This cohort drives the strongest demand for health and aged care services and therefore related employment.

The strong growth in the population aged 85+ in the adjoining regions/LGAs justifies the inclusion of these areas in an assessment of the demand for COE.

Table 10: Primary, secondary catchment and WA population growth projections for 2026

Area	Age 55+	From 2021 % change	Age 70+	From 2021 % change	Age 85+	From 2021 % change
Peel catchment	56,090	+10.3%	23,810	+3.6%	4,600	+31.7%
Secondary catchment	124,715	+16.9%	51,630	+22.3%	8,485	+32.5%
Total catchment	**180,085**	**+14.6%**	**75,440**	**+15.7%**	**13,085**	**+32.2%**
Perth Metro comparator	**671,230**	**+16.5%**	**282,775**	**+21.1%**	**49,610**	**+21.4%**
WA Total	**858,960**	**+15.7%**	**361,665**	**+21.9%**	**62,035**	**23.7%**

Source: WA Tomorrow Population Projections Report 11 Band D, 2021

Table 11: Primary, secondary and WA catchment population growth projections for 2031

Area	Age 55+	From 2021 % change	Age 70+	From 2021 % change	Age 85+	From 2021 % change
Peel catchment	63,610	+25.1%	27,340	+18.9%	5,755	+64.8%
Secondary catchment	143,720	+35.2%	63,650	+50.7%	11,715	+83.0%
Total catchment	**207,330**	**+32.0%**	**90,990**	**+39.5%**	**17,470**	**+76.6%**
Perth Metro comparator	**764,275**	**+32.7%**	**338,765**	**+45.0%**	**63,520**	**+55.5%**
WA Total	**973,025**	**+31.0%**	**435,440**	**46.8%**	**80,435**	**60.4%**

Source: WA Tomorrow Population Projections Report 11 Band D

2.6 Aged Care Demand

2.6.1 Aged Care system structure

The aged care service system currently has three main service types, all of which will contribute to the workforce requirements. These are:

- Commonwealth Home Support Program (CHSP) – the most basic service type
- Home Care Packages (HCP) – care subsidies that support care up to the highest level of complexity
- Residential Aged Care – made up of permanent care and respite
    - Transition Care (TC) and Short Term Restorative Care (STRC) are two sub types of residential aged care that may be provided in a residential setting, a community setting or a combination of the both

The proportional breakdown by aged care service type in WA at 30 June 2021 is as follows:

- Residential aged care (including TC) 18.2%
- HCP 15.2%
- CHSP 66.5%

This section of the Needs Analysis documents and analyses the three service types in both catchments calculating demand based on:

- The profile of current service use
- Current population structure based on 2021 Census
- The changing population as projected for 2026 and 2031
- Current supply of services

2.6.2 Residential Aged Care

The following table includes calculation and analysis of the supply and demand for residential aged care in 2021, 2026 and 2031. The analysis focuses on the primary and secondary catchments. The analysis also includes an aggregation of the catchment data.

The key finding is that the catchments are significantly undersupplied and that without considerable investment ($316,626,000.00 in Peel alone) the undersupply will dramatically increase to the point that the total catchment will meet only 48.1% of demand.

The table is supported by notes showing the sources of information and expanding the narrative relating to supply and demand.

Table 12: Residential aged care – supply and demand

Year	Area	Places[1]	Occupancy Rate[2]	Occupied Places[3]	Operational Places per 1,000[4] 70+	Benchmark Places per 1,000[5] 70+	+/- Benchmark Ratio[6]
2021	Peel catchment	905	95.4%	863	37.6	58.1	-20.5
	Secondary catchment	1,928	87.2%	1,681	39.8	58.1	-18.3
	Total catchment	**2,833**	**89.8%**	**2,545**	**39.0**	**58.1**	**-19.1**
	WA	**19,049**	**88.3%**	**16,820**	**56.7**	**60.1**	**-3.4**
2026	Peel catchment	905	96.0%	869	36.5	58.1	-21.6
	Secondary catchment	1,928	90.0%	1,735	33.6	58.1	-24.5
	Total catchment	**2,833**	**92.0%**	**2,606**	**34.5**	**58.1**	**-23.6**
	WA	**19,049**	**96.0%**	**18,287**	**50.6**	**60.1**	**-9.5**
2031	Peel catchment	905	98.0%	887	32.4	68	-35.6
	Secondary catchment	1,928	95.0%	1,832	28.8	68	-39.2
	Total catchment	**2,833**	**96.0%**	**2,720**	**29.9**	**68**	**-38.1**
	WA	**19,049**	**96.0%**	**18,287**	**42.0**	**68**	**-26.0**

Note 1: Operational places detailed in the table are taken from published data in the Department of Health's Aged Care Services List 2021. FMA has assumed that no new facilitates will come on line between 2023 and 2026. The assumption is based on the current uncertainty regarding how providers will be appropriately funded to maintain viability and the hiatus in development during the pandemic. The 2031 projection is based on no new facilities coming online. This assumption supports insights into the quantum of need and capital investment based on the age care needs of the catchment.

Note 2: Occupancy rates are published for Inner Regional (Peel) and outer Regional areas (South West) and WA as a whole in the Aged Care Data Snapshot 2021; Department of Health Aged Care Data Warehouse published on GEN-agedcaredata.gov.au. This published data provides a solid basis for estimating the current occupancy rate for residential aged care.

Note 3: The occupied places relate to permanent and respite residential aged care places calculated by subtracting the occupancy rate from the published data relating to operational places (places available for occupancy).

Note 4: The rate per 1,000 persons 70+ years has been calculated using the Census data. The 2026 and 2031 WA Tomorrow population projections (Band D) have been used to calculate the 70+ years populations for 2026 and 2031.

Note 5: Benchmarks have been established based on an announcement made by the Minister relating to a temporary adjustment to the targeted planning ratios 'The Government will temporarily reduce the residential aged care provision ratio from 78.0 places to 60.1 places per 1,000 people aged over 70 years over 3 three years from 2024-25.' [9] This adjustment means that the two places commonly folded into the planning ratio for short term restorative care and transition care remain unchanged. The published planning ratio has been 80 places per 1,000 persons aged 70+ years.10

Note 6: The plus/minus calculation is based on over supply (positive) or undersupply (minus)

The requirement for residential aged care is highlighted as follows:

[9] https://www.health.gov.au/our-work/aged-care-reforms/what-were-doing/sustainable-care
[10] https://performancedashboard.d61.io/healthcare_vic/health_agedcare_state

- An estimated 34% to 53% of Australians will enter a residential aged care facility during their lifetime[11]
- About 17.5% of people who accessed aged care services in 2020 -21 accessed residential aged care[12]

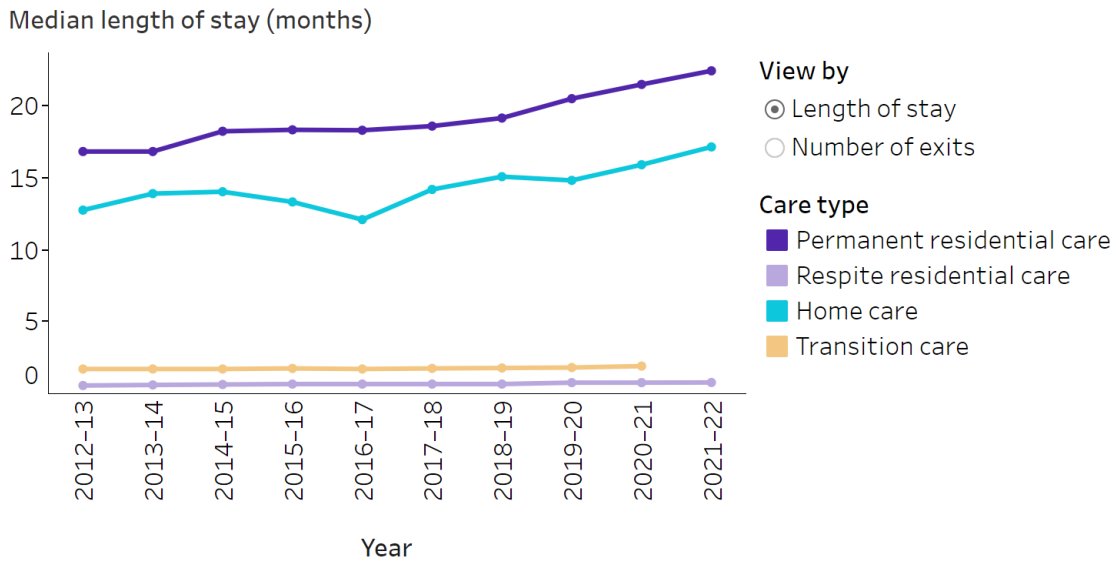
FMA are of the view that there will be a permanent change to the mix of HCP and residential aged care with the ratio for residential aged care being lowered permanently. The basis of this statement is that there is a preference for older people to receive their care at home.

The preference however does not translate into residential care not being required. The factors that will offset older people's preference and drive demand for residential aged care:

- A reduction of the number unpaid carers as detailed in 2.5.2
- Increasing length of life will result in higher numbers of persons living with dementia and the accompanying impact on behaviours/complexity that require management in a residential setting
- An increased role in residential aged care to provide palliative care (in 2021-22 most exits from permanent residential care were due to death, at 86% of exits)[13]
- With increased length of life there will be more people in the last years of their lives that will require technical nursing relating to comorbidities including the management of mental health and dementia

The other factor that will impact the number of residential aged care places required is the length of stay. If the average length of stay reduces, the same number of places can serve a greater number of people and vice versa. Figure 7 demonstrates that the median length of stay has progressively increased over the last decade, which is contrary to the often quoted comments of the sector that "no sooner do they arrive and they exit due to death; we are delivering palliative care"[14].

Figure 7: Residential aged care length of stay 2012-13 to 2021-22



Source: https://www.gen-agedcaredata.gov.au/Topics/People-leaving-aged-care#Reasons%20for%20leaving%20aged%20care

Based on all of these factors, FMA have formed the view that in 2031 the overall planning ratio will have increased slightly in response to the increase in the proportion and numbers of the very old persons. Our estimate is 132 places (currently 125). The

[11] Broad JB, Ashton T, Gott M, McLeod H, Davis PB & Connolly MJ (2015). Likelihood of Residential Aged Care Use in Later Life: A simple approach to estimation with international comparison. ANZJPH 39[4], pp 374-79
[12] AIHW GEN Data: Fact Sheet 2020-21
[13] AIHW GEN Data: People leaving aged care – Reason for Leaving Aged Care, Number of exits by care type and discharge reason 2021-22
[14] FMA Grey literature – Peel Region Aged Care Needs Study

forecast mix will be 68 residential aged care places and 62 HCP per 1,000 persons 70+ years with a continuation of the 2 places allocated TC/STRC. Regardless of the planning ratios used in this analysis, this is a conservative reflection of demand.

New residential aged care places

Table 13 details the requirement for additional residential aged care places. The additional residential aged care places have a direct impact on the number and types of employees and therefore the training requirements that may be met in full or part by a COE.

In relation to broader economic impact, construction of new residential aged care facilities will be an important contributor in the primary catchment. Based on the current cost of construction calculated from Aged Care Building Cost Indicator released by architects Caulfield Krivanek Group (CKG) adjusted to take into account the significant increases in the cost of labour and materials, FMA has calculated an average cost in 2023 of $339,000 per place.[15] This cost includes landscaping, car parks and roadways, headworks and connections, fittings and furnishing but not the cost of land. The fittings, finishes and furnishings have been estimated as a medium quality. The average build per facility has been estimated as 70+ beds.

The expenditure required by 2031 in new places:

- Peel catchment $323,446,680.00
- Secondary catchment $813,667,800.00
- Total catchment $1,137,114,480.00
- WA in total $3,838,456,320.00

Table 13: New residential aged care places required to meet demand 2021 to 2031

Year	Area	70+ Population	Total Demand	New Places to meet demand
2021	Peel catchment	22,989	1,382	477
	Secondary catchment	42,229	2,538	610
	Total catchment	**65,218**	**3,920**	**1,087**
	WA	**296,627**	**17827**	**1007***
2026	Peel catchment	23,810	1,431	526
	Secondary catchment	51,630	3,103	1,175
	Total catchment	**75,440**	**4,534**	**1,701**
	WA	**361,665**	**21736**	**3449**
2031	Peel catchment	27,340	1,859	954
	Secondary catchment	63,650	4,328	2,400
	Total catchment	**90,990**	**6,187**	**3,354**
	WA	**435,440**	**29,610**	**11,323**

Sources: Calculated by FMA using the Aged Care Services List 2023, ABS Census 2021, WA Tomorrow population projections (Band D) 2026, 2031, Published and estimated benchmark data described in the notes to Table 12.

[15] https://caulfieldkrivanek.com/updated-aged-care-cost-indicator/

*The lower figure for WA as a whole indicates that residential aged care places are not distributed evenly across WA as whole. Therefore there will be areas where operational places will exceed the temporary reduction in the planning ratio of residential aged care places (from 78 per 1,000 70+ years to 60.1).

2.6.3 Home Care Package (HCP) Program

HCPs provide aged care in the home over 4 levels of care: Level 1, Level 2, Level 3 and Level 4. Currently the Community Home Support Program (CHSP) – a more basic program community based aged care program – is separate to HCP. Current aged care reform processes will result in these two programs being consolidated as a single aged care program where service levels and types are based on assessed need.

The current service mix[16] (proportion of the number of persons supported on HCPs in the catchments) and subsidies[17] for HCP across the four level of HCP in the catchment is:

- **Level 1:** 1.2% of HCP participants; annual subsidy per package $10,271
- **Level 2:** 22.5% of HCP participants; annual subsidy per package $18,064
- **Level 3:** 30.1% of HCP participants; annual subsidy per package $39,311
- **Level 4:** 46.2% of HCP participants; annual subsidy per package $59,594

The key HCP supply/demand finding (see Table 14) is that HCP allocation exceeds target levels in Peel but is under allocated in the secondary catchment. The probable explanation is that demand has increased due to the under supply of residential aged care and the impact of COVID reducing new entrants into residential aged care. It is also likely that over COVID that more unpaid carers were available due to an increased number of people working from home.

It is expected that demand will rise through to 2031 requiring at least 1,258 additional HCPs to be allocated across the catchments. An estimated 90% of these subsidies will be used in employment (mainly local).

Table 14: HCP supply and demand 2021-2031

Year	Area	Places[1]	Operational places per 1,000[2] 70+	Benchmark places per 1,000[3] 70+	+/- Benchmark Ratio[4]
2021	Peel catchment	1,455	63.3	58.1	5.2
	Secondary catchment	2,117	50.1	58.1	-8.0
	Total catchment	**3,572**	**54.8**	**58.1**	-3.3
	WA	**16,436**	**55.4**	**58.1**	**-2.7**
					New places required 2021 -2026:
2026	Peel catchment	1,383	58.1	58.1	-71.2
	Secondary catchment	3,000	58.1	58.1	883
	Total catchment	**4,383**	**58.1**	**58.1**	**811**
	WA	**21,013**	**58.1**	**58.1**	**4,577**
					New places

[16] Home Care Packages Program Data Report 3rd Quarter 2021-22 1 January – 31 March 2022 August 2023 Department of Health
[17] Department of Health Aged Care Subsidies and Supplements New rates of daily payments effective from 1 July 2023

Year	Area	Places[1]	Operational places per 1,000[2] 70+	Benchmark places per 1,000[3] 70+	+/- Benchmark Ratio[4]
					required 2026-2031:
2031	Peel catchment	1,695	62.0	62.0	312
	Secondary catchment	3,946	62.0	62.0	947
	Total catchment	**5,641**	**62.0**	**62.0**	**1,258**
	WA	**26.997**	**62.0**	**62.0**	**5,985**

Note 1: Places in 2021 are drawn from published data at ACPR level.[18] FMA has calculated based on proportions of the population aged 70+ years and the estimated number of operational places in Peel and the secondary catchment.

Note 2: Operational places are a calculation of the number of operational places as a proportion of the 70+ population published in the 2021 Census. 2026 and 2031 operational places are calculated using the WA Tomorrow population projections (Band D). FMA have assumed that the Commonwealth will allocate HCP (operationalise places) to respond to their theoretical estimate of demand. In the event that demand exceeds the planning ratio the Commonwealth may restrain supply aligned to budgeted expenditure. The aged care services are not guaranteed by the Commonwealth it is a rationed system. In contrast the NDIS guarantees reasonable and necessary supports to anybody under 65 years according to their assessed need.

Note 3: The benchmark figure is a planning ratio used by the Department of Health and Aged Care to plan for expenditure and supply. The ratio used is a product of the Minister's notification of a temporary adjustment to the residential aged care ratio as discussed in Note 5 to Table 12. The overall planning ratio is 125 places. FMA has calculated that the balance, 58.1 places, will be applied to HCP. This will leave 1.8 places for transition care and Short Term Restorative Care. This reduction from 2 to 1.8 is based on admissions to transition care having decreased by 30% 2021 to 2022.19

The 2031 Benchmark is based on our view that the benchmark will increased from the current 125 to 132. This is partially because using the population aged 70+ years is no longer an adequate proxy for demand. 70+ years was originally a valid proxy developed by Prof Len Gray and FMA Director Doug Faircloth's business partner in Verso Consulting in the early 1990s. As detailed in the demographics, increased numbers and proportion of users are around 85 years of age. This increase as a proportion of the population and in absolute numbers will result in significant additional demand beyond the current 125 (HCP and residential aged care) benchmark.

Note 4: the +/- variation is a calculation of over and under supply at 2021. In 2026 and 2031 the calculation is the number of new places required. This calculation supports an understanding of the number of new staff who will need to be employed to meet the increasing demand.

2.6.4 Commonwealth Home Support Program

While there is a reform process underway that will consolidate CHSP and HCP into one new program, the focus of CHSP and the proportion of people over 65 years accessing the program and the service profile is unlikely to change. Calculating the number of users now and into the future, and the workforce required to deliver the service is valid for this study. The focus of this Needs Analysis is to provide evidence of the current size of the workforce delivering this service and the workforce growth required into the future.

Using the proportion of the population aged 65+ years in the primary and secondary catchments, FMA has calculated that of 60,861 recipients in WA, that CHSP recipients in the catchments are as follows:

- Peel catchment: 4,747
- Secondary catchment: 9,007
- Total catchment: 13,754

[18] Home Care Packages Program Data Report 3rd Quarter 2021-22 1 January – 31 March 2022 August 2023 Department of Health
[19] https://www.gen-agedcaredata.gov.au/Topics/Admissions-into-aged-care

The Productivity Commission's data on CHSP expenditure in WA is $332.4M in 2021-2022. This equates to $5,462 per client, however some of the Commonwealth's expenditure (including training) may have been spent on sector development and therefore we have calculated the average expenditure per client as $5,200.

Table 15 demonstrates that demand exceeds supply for all but 3 of 17 service types. Broader industry consultations conducted by FMA outside this Needs Analysis identifies that a combination of factors contribute to the under scenario, including:

- Workforce shortage
- Out of date allocations of block funding to providers
- Inflexibility from the Department regarding enabling providers to utilise unspent funds in areas where providers can supply labour and deliver at a sustainable scale
- Changes to shift entitlements has meant that some services cannot be delivered in a financially sustainable manner by providers, which is exacerbated in rural areas where travel is required between clients

Table 15: CHSP service types and client usage

CHSP Service Type	Client Usage	Proportion to which demand exceeds supply across WA CHSP	CHSP Service Type	Client Usage	Proportion to which demand exceeds supply across WA CHSP
Allied Health and Therapy Services	7.9%	15.5%	Meals	3.4%	2.6%
Assistance with Care and Housing	0.2%	0%	Nursing	1.7%	20.4%
Centre-based Respite	0.3%	14%	Other Food Services	0.3%	0%
Cottage Respite	0.3%	8%	Personal Care	5.2%	19.4%
Domestic Assistance	29.9%	17.8%	Social Support Group	5.7%	15%
Flexible Respite	1.9%	9.8%	Social Support Individual	10.5%	11%
Goods, Equipment and Assistive Technology	3.7%	33.3%	Specialised Support Services	0.4%	0%
Home Maintenance	15.3%	25.0%	Transport	11.3%	6.3%
Home Modifications	2.1%	15.2%			

Source: GEN AIHW Aged Care Data Snapshot 2021 Release 3.3 and Deloitte Access Economics CHSP Data Study supply and demand

Future demand for CHSP detailed in Table 16 assumes, regardless of CHSP reforms, that there will be a continuation of similar service types and constant usage as a proportion of the eligible population within the catchment. The data in this table has been calculated to support estimates of the workforce that will be required to deliver this level of service use.

Table 16: Future CHSP demand (2031)

Area	Projected CHSP clients (2031)	Funding
Peel catchment	5717	$29,727,149
Secondary catchment	14190	$73,790,233
Total catchment	**19817**	**$103,048,174**

WA	**85,109**	**$397,276,428**

Source: WA Tomorrow Population Projections Band D 2026, 2031 and FMA calculated funding based on Productivity Commission's Data Report on Government Expenditure 2023 table 14 A.5 for 2020-21.

2.6.5 Summary of New Aged Care Places 2031

The following summarises the number of new aged care places required (CHSP is expressed as clients).

Table 17: Total new aged care places by 2031

Area	Residential Aged Care Places	HCP - Places	CHSP Clients	Total new places /clients
Peel catchment	954	312	970	2236
Secondary catchment	2,400	947	5,183	8,530
Total catchment	**3,354**	**1,258**	**6,062**	**10,674**
WA	**11,323**	**5,985**	**24,248**	**41,556**

Source: Calculated by FMA drawing on: The Department of Health and Ageing Aged Care Services list 2021, Home Care Data Report 3rd quarter 2021-22 Productivity Commission ROGS Data 2023, WA Tomorrow report 11 band D, Aged Care Data Snapshot 2021; Department of Health Aged Care Data Warehouse published on GEN-agedcaredata.gov.au. and Ministerial announcement; planning ratios https://www.health.gov.au/our-work/aged-care-reforms/what-were-doing/sustainable-care

2.7 Aged Care Workforce

2.7.1 Residential aged care

Care minutes

The Royal Commission into Aged Care Quality and Safety (Royal Commission) found that the routine care of older people in residential aged care often did not meet expectations for assistance with the activities of daily living, with many examples of substandard care in providing for the most basic of human needs.

The Royal Commission's Final Report:

- identified staffing levels as vital to the quality of care that older people receive
- recommended introducing minimum care minutes responsibility to increase care time for the people living in aged care homes across Australia
- recommended linking minimum care minutes responsibility to a casemix-adjusted funding model like the Australian National Aged Care Classification (AN-ACC) funding model.

Funding for care minutes is delivered through the AN-ACC model (the way needs of people is assessed), to ensure approved services are funded to provide residents with an appropriate standard of skilled care. The provision of allied health and lifestyle services is not included as part of care minutes but is funded separately under AN-ACC and is required under legislation for all residents who need these services.

The care minute requirements have been used to calculated to determine the size and mix of the aged care workforce currently and the number and mix of qualifications/roles required into the future in the primary and secondary catchments.

The stages were/are:

- from 1 October 2022 provide an initial target of 200 care minutes per resident per day, including a minimum of 40 minutes of RN time per day

- from 1 October 2023 mandatory provision of 200 minutes per resident per day, including a minimum of 40 minutes of RN time per day
- from 1 October 2024 mandatory provision of 215 minutes per resident per day, including a minimum of 44 minutes of RN time per day. [20]

Aged care workforce numbers

FMA has calculated the workforce requirements in residential aged care using:

- The number of current places
- The number of new places required (see Table 13)
- The mandatory care minutes
- The number of minutes available for each of the roles taking into account leave, training, supervision including the span of control exercised by the differing roles

For every residential facility of 100 places there will be a requirement (mandated minutes per client per day) by 2024 of:

- Registered nurses: 17.6
- Enrolled nurses: 10.3
- Support workers: 56.0
- Totalling: 83.9

In addition, facilities with 100+ residents there will need to be hotel service staff, allied health and allied health assistants and lifestyle (including chaplaincy) making up another 19.6 persons. Therefore in total a 100 bed facility will require a complement of 103.5 staff members.

Table 18: Current (2021) residential aged care workforce profile

Area	Number of places[1]	Worker category[2]	Estimated workforce[3] 2021
Peel catchment	863	RN	152
		EN	89
		PCW/SW	484
		Other	170
		Total	894
Secondary catchment	1,681	RN	296
		EN	172
		PCW/SW	942
		Other	330
		Total	1,740

[20] Care minutes and 24/7 registered nurse responsibility guide; Department of Health June 2021

Total catchment	**2,545**	**RN**	**448**
		EN	**261**
		PCW/SW	**1,425**
		Other	**500**
		Total	**2,634**
WA	**17,827**	**RN**	**2,958**
		EN	**1,725**
		PCW/SW	**9,422**
		Other	**3,304**
		Total	**17,409**

Note 1: The number of places is documented in the GEN Data AIHW - Aged Care Services List 2021. The number of places has been discounted by the occupancy rate published in the Aged Care Data Snapshot 2021 Release 3.3 for Inner and Outer Regional WA.

Note 2: Worker categories published in the 2020 – Aged Care Workforce Census and the Care Minutes and 24/7 Registered Nurse Responsibility Guide Department of Health and Ageing. The categorisation was also compared to the Stewart Brown Aged Care Survey to cross reference findings to the results to validate 'other' worker proportions and categories.

Note 3: As documented ahead of this table

Table 19: Future residential aged care workforce profile (2031)

Area	Number of new places[1]	Worker category	Estimated workforce[2] due to growth in demand	Number retiring 2021 to 2031 [3]	Total new staff required[4]
Peel catchment	954	RN	168	28	196
		EN	98	16	114
		PCW/SW	534	89	623
		Other	187	31	219
		Total	988	164	1,152
Secondary catchment	2,400	RN	422	82	504
		EN	246	48	294
		PCW/SW	1,344	262	1,606
		Other	471	92	563
		Total	2,484	483	2,968
Total catchment	**3,354**	**RN**	**590**	**110**	**700**
		EN	**344**	**64**	**408**
		PCW/SW	**1,879**	**350**	**2,229**
		Other	**659**	**123**	**782**
		Total	3,472	648	4,119
WA	11,783	RN	2,249	436	2,686
		EN	1,311	254	1,566

Area	Number of new places[1]	Worker category	Estimated workforce[2] due to growth in demand	Number retiring 2021 to 2031 [3]	Total new staff required[4]
		PCW/SW	7,164	1,389	8,553
		Other	2,512	487	3,000
		Total	**13,238**	**2,566**	**15,804**

Note 1: The number of residential places is calculated using the population driven benchmarks (the benchmarks have been estimated as detailed in note 5 to Table 12) less the number of current operational places as a basis of estimating the new workers.

Note 2: The estimated workforce is a calculation using the new places expressed as proportions of the worker categories detailed in the 2020 Aged Care Workforce Census. The proportions have been established by converting the available hours work for an EFT equivalent into the mandated minutes and 24/7 coverage requirements as detailed ahead of Table 18 in this section.

Note 3: Those retiring is calculated using the Aged Care Workforce Census for residential aged care and applying the current age structure in the census to calculate those entering retirement over a 10 year period (2021 to 2031). The census reports the age structure in 10 year age ranges; FMA have calculated the age for the purpose of this calculation at the mid-point eg 30-39 = 35. The estimated number retiring has then been applied to the proportions in each category in the Aged Care Workforce Census.

Note 4: Total new staff required is a calculated figure using estimated workforce due to growth in demand and number of 2021 to 2031 retiring.

2.7.2 Home Care Packages

Table 20 identifies the current workforce supporting the delivery of HCPs across the primary and secondary catchments. The table documents a calculation of the number of workers who will need to be replaced to maintain the workforce at the current level. The retiring population and the expected growth of HCP based on current and future supply and demand supports the development of calculations of the total number of new workers by employment requirement that will require training.

Other categories of employment in HCP include nurse practitioners, allied health (including social workers), allied health assistants, and food services. There is insufficient comparable and consistent data to support analysis provided in Table 20 for RNs, ENs and PCW/SWs. However an estimate of the total workforce required in relation to allied health and allied health assistants can be made by disaggregating national data and overlaying expected growth in the overall HCP program. This estimate[21] is that by 2031 the allied health and allied assistants workforce in total size will be:

- Primary catchment: 72 an increase of 16.9% on 2021
- Secondary catchment: 166 an increase of 86.4% on 2021
- Total catchment: 237 an increase of 57.9% on 2021

Notes on sources and methods used to determine data in Table 20 are detailed in the notes at the foot of this table.

Table 20: HCP employment demand by occupation

Area	Occupation	Number 2021[1]	Growth to 2031[2]	Retiring 2021 to 2031[3]	Total new by 2031
Peel catchment	RN	71	12	19	31
	EN	22	4	6	10
	PCW/SW	1,035	171	316	487

[21] Estimate developed using 2020 Aged Care Workforce Census Report Department Health and growth calculations HCP Supply and Demand table 8

Secondary catchment	RN	104	90	28	118
	EN	32	27	9	37
	PCW/SW	1,506	1,301	459	1,760
Total catchment	**RN**	**175**	**101**	**47**	**149**
	EN	**53**	**31**	**16**	**47**
	PCW/SW	**2,541**	**1,472**	**775**	**2,246**
WA	**RN**	**668**	**313**	**180**	**493**
	EN	**203**	**95**	**60**	**155**
	PCW/SW	**9,700**	**4,539**	**2,958**	**7,498**

Note 1: The number has been calculated by disaggregating the National data (Home Care Packages Program Data Report 4th quarter 2020-2021 and Aged Care Data Snapshot 2021 Release 3.3) relating to the case mix and numbers of HCPs and reweighting the disaggregated data to reflect the primary and secondary catchment and WA total HCP case mix and HCP supply and applying the ratio of employment types from 2020 Aged Care Workforce Census Report Department Health to determine the current workforce.

Note 2: The calculation assumes the retention of the current case mix and uses HCP supply and demand as reported in Table 14 to estimate growth.

Note 3: The retirement calculation utilises the published age structure of the current RN, EN, and Support Worker workforce and calculates retirement for those who will be older than 68 years by 2031. We have only used retirement estimates rather that other broader churn in the workforce as we have assumed that churn not result in a net loss of workers.

Note 4: New workers required to meet HCP demand by worker type is a calculation of the new employees plus the number of workers retiring.

2.7.3 Commonwealth Home Support Program

While CHSP will be consolidated with HCP in the future, the dynamics driving the need for services and related employment will be as detailed in this section regardless of the Department's administrative arrangements. CHSP as a program supports the largest number of clients of any aged care program: 65.5% of all aged care recipients. CHSP generally provides aged care services that are designed to meet less complex care needs. The average spend per person is $5,200 per annum.

Table 21: CHSP current and future employment by occupation

Area	Occupation[1]	Proportion of Occupation Type[1]	2021[2]	Retirement numbers[3]	Growth 2021 to 2031[4]	Total new[5]
Peel catchment	RN	9.7%	49	15	10	25
	EN	3.1%	16	5	3	8
	PCW/SW	78.1%	398	133	81	215
	Allied Health	7.7%	39	12	8	20
	AHA	1.4%	7	2	1	4
Secondary catchment	RN	9.7%	94	29	54	83
	EN	3.1%	30	8	17	26
	PCW/SW	78.1%	756	253	435	688
	Allied Health	7.7%	75	23	43	66
	AHAH	1.4%	14	4	8	12
Total catchment	**RN**	**9.7%**	**143**	**44**	**63**	**107**

Area	Occupation[1]	Proportion of Occupation Type[1]	2021[2]	Retirement numbers[3]	Growth 2021 to 2031[4]	Total new[5]
	EN	3.1%	46	13	20	33
	PCW/SW	78.1%	1,154	387	509	895
	Allied Health	7.7%	114	35	50	85
	AHA	1.4%	21	6	9	15
Total WA	RN	9.7%	569	174	227	401
	EN	3.1%	182	50	73	123
	PCW/SW	78.1%	4,585	1,536	1,827	3,363
	Allied Health	7.7%	452	138	180	318
	AHA	1.4%	82	25	33	58

Note 1: Reported in the 2020 Aged Care Workforce Census Report Department of Health and Aged Care. National proportions from the census have been used for the primary and secondary catchments and WA as a whole in the absence of any other data.

Note 2: The 2021 total CHSP workforce uses the workforce proportions (note 1) and the ABS Census data for 65+ years to provide weighting for each catchment.

Note 3: The numbers for retiring workers are a disaggregation of the 2020 Aged Care Workforce Census Report Department of Health and Aged Care age structure by profession (only reported by RN, EN, and Support Worker) with allied health and allied health assistant assumed to have the same age structure as RNs. The numbers retiring have been calculated based on those reaching 68 years up and till 2031 (the numbers retiring may be higher if the current retirement rate for Support Workers is maintained at 62 years as reported by DTWD in consultations conducted for this study).

Note 4: WA Tomorrow Population Projections (Band D) for the population aged 65+ years in the primary and secondary catchments for 2031 have been used to determine growth rates.

Note 5: The total new employees needed by occupation type for CHSP have been calculated based growth and replacing retiring workers.

2.7.4 Aged Care Program Summary

Table 22 aggregates findings relating to future workforce demand across residential aged care, HCP and CHSP.

Table 22: Aggregated future workforce by occupation type

Area	Occupation	Growth to 2031	Retiring 2021 to 2031	Total new by 2031
Peel catchment	RN	190	62	252
	EN	105	27	132
	PCW/SW	786	538	1,324
	Total	1,082	627	1,709
Secondary catchment	RN	554	139	693
	EN	287	66	352
	PCW/SW	2,985	974	3,959
	Total	3,937	1,178	5,115
Total catchment	RN	744	201	955
	EN	392	92	488

Area	Occupation	Growth to 2031	Retiring 2021 to 2031	Total new by 2031
	PCW/SW	3,771	1,513	5,352
	Total	4,907	1,806	6,795
WA	RN	2,789	790	3,579
	EN	1,479	364	1,843
	PCW/SW	13,530	5,883	19,414
	Total	17,798	12,921	30,720

Source: Aggregation of Table 19, Table 20 and Table 21 (see notes on each table)

2.7.5 Allied Health

Allied health is the largest clinical workforce in primary health care, providing a range of evidence-based health services. Access to allied health services is inconsistent across Australia, due to shortages of allied health workers, particularly in rural and remote areas, and complex and varying financing arrangements across the health, aged care and disability care systems.

In relation to workforce growth, the Government reports that it is "looking to optimise the development and utilisation of high-quality allied health services in primary health care", and that within the allied health disciplines 'the fastest-growing fields are occupational therapy, osteopathy and physiotherapy."[22] The Government also reports an "[expected] demand for allied health professionals to grow further over the next decade, as Australia's population changes" and "this is especially true for rural and remote Australia, as allied health professionals are concentrated around major urban areas".[23]

The allied health workforce data relates to:

- Pharmacists
- Chiropractors
- Optometrists
- Podiatrists
- Physiotherapists
- Occupational therapists
- Osteopaths

A notable omission are speech pathologists who play an important role in supporting people who have been affected by stroke and those living with dementia. The health workforce data relates to allied health working across all contexts and all ages.

Table 23: Allied health required workforce

Area	Allied health 2021[1]	Allied health 2026[2]	+/- 2021-2026 %	2031[3]	+/- 2021-2026%
Primary catchment	438	748	70.8%	851	94.3%
Secondary catchment	1,429	1,749	22.4%	1,946	36.2%
Total catchment	**1,867**	**2,497**	**33.7%**	**2,797**	**49.8%**
WA	**11,658**	**13,104**	**12.4%**	**14,288**	**22.6%**

[22] https://www.health.gov.au/topics/allied-health/about
[23] https://www.health.gov.au/topics/allied-health/about

Note 1: Extracted customised Search Health Workforce Data 2021 – Allied Health Department of Health and Aged Care

Note 2: Budget 2022-23; Portfolio Budget Statements, Budget Related Paper No. 1.7 Health Portfolio (p74) National Ratio's for MM1 and MM2-7 locations calculated as a ratio using WA Tomorrow 2026 population (all ages)

Note 3: The 2031 Workforce data is an estimate calculated by FMA on the basis that the 2026 Allied Health planning ratio published for 2026 remains constant. The numbers have been calculated as a ratio using WA Tomorrow 2031 population (all ages).

2.8 Training the Aged Care Workforce

2.8.1 Current Qualifications

This section of the report extensively but not exclusively uses the 2020 Aged Care Workforce Census Report to provide evidence of the qualifications and training offered to staff across the three major aged care programs.

The number of personal care and support workers holding a Certificate III in Individual Support (Ageing) or the equivalent or higher in a relevant direct care field:

- Residential aged care 66%
- HCP 63%
- CHSP 71%

The number of personal care and support workers studying for a Cert III in Individual Support (Ageing) or the equivalent:

- Residential Aged Care 2%
- HCP 4%
- CHSP 2%

2.8.2 Drivers of current and future skill requirements

Length of life and dementia care

Life expectancy changes over the course of a person's life, because as they survive the periods of birth, childhood and adolescence, their chances of reaching older age increase. The life expectancy at different ages can be presented as the number of additional years a person can expect to live, or their expected age at death in years.

Men aged 65 in 2017–2019 could expect to live another 20.0 years (an expected age at death of 85.0 years), and women aged 65 in 2017–2019 could expect to live another 22.7 years (an expected age at death of 87.7 years)[24].

The increase in length of life is an important consideration in relation to aged care. There is a very small increase in the years of dependency and high health costs associated with increasing length of life. People tend to need the highest levels of care in the last three years of their life.

However, there is a relationship between increased length of life and dementia. Dementia rates steadily increase until at least 90 years.

Dementia Australia provide the following information :

[24] AIHW Deaths in Australia updated 25 June 2021

- Dementia is the second leading cause of death of Australians
- Dementia is the leading cause of death for women
- In 2021, there are an estimated 472,000 Australians living with dementia. Without a medical breakthrough, the number of people with dementia is expected to increase to almost 1.1 million by 2058
- In 2021, there were an estimated 28,300 people with younger onset dementia, expected to rise to 29,350 people by 2028 and 41,250 people by 2058. This can include people in their 30s, 40s and 50s
- In 2021, it is estimated that almost 1.6 million people in Australia are involved in the care of someone living with dementia.
- Approximately 70% of people with dementia live in the community
- More than two-thirds (68.1%) of aged care residents have moderate to severe cognitive impairment[25]

Implications; dementia care will become an increasingly greater component of service requirements in community care and central to service provision in residential aged care. Dementia care will not be characterised as a speciality, but rather as a core function and therefore the workforce skills will need to be aligned to this requirement

Length of stay

Reviewing data relating to length of stay in a residential facility demonstrates that there is high 'churn' for people entering and staying for a comparatively short period of time. The overwhelming majority of exits (84%) from residential aged care occur because the resident died. A decreasing number of residents are going to hospital for palliative care. More than 20% of entrants will stay for less than 5 months, however about 1 in 4 residents will stay longer than four years. [26]

[25] Dementia Australia (2022). Key Facts and Statistics. www.dementia.org.au/sites/default/files/2021-03/2021-Dementia-Key-Facts-Stats.pdf

[26] https://www.gen-agedcaredata.gov.au/Topics/People-leaving-aged-care

Table 24: Length of stay residential aged care

Residential aged care	0 to 5 months	6 to 11 months	12 to 29 months	30 to 47 months	48+ months
National Length of Stay distribution	22.8%	11.2%	24.1%	16.2%	25.7%

Source: AIHW gen-agedcaredata.gov.au

Implications: the residential aged care workforce will increasingly be required to provide palliative care. Nurses will need to be trained to administer palliative care medications.

Health Conditions

Research published in the Australian Health Review provides insight into comorbidities and the mitigation and management requirements required to support residents in residential aged care. Key findings include:

- 93% of residents had some form of circulatory disease, with hypertension the most common (62%)
- Most residents (93%) had a mental or behavioural disorder, including dementia (58%) or depression (54%)
- For most conditions experienced by people in residential aged care, using the Electronic Health Record data, identified approximately twice the number of people with health and behavioural conditions compared to aged care funding assessments. Agreement between data sources was highest for multiple sclerosis, Huntington's disease, and dementia[27]

Implications: the aged care workforce require training to support and manage:

- Complex health conditions
- Higher risks regarding polypharmacy that requires monitoring/management to avoid harmful unintended consequences for older people
- Behaviour management strategies related to mental health and dementia care

2.8.3 In-Service and Professional Development

The following tables (Table 25, Table 26, Table 27) provide details of the 8 nominated in-service and professional development programs tracked in the Aged Care Workforce Census. The tables report the quantum of places offered per staff member (RNs, ENs and PCW/SWs) in the three aged care programs. The tables also identify the numbers of organisations (facilities/providers) offering training.

As expected, Infection Prevention Control (IPC) is the most common in-service training given the timing of the census in relation to the pandemic. It is interesting to note that the majority of services do not offer training places for the entire staff complement. The proportion of participating services also demonstrates that it was not common for all of the courses to be offered in to staff in 2020. Residential aged care services offering no training has reduced from 2016 to 2020 from 19.6% 2016 to 5% in 2020. In the 2016 census the Home Care and Home Support Aged Care Workforce results were combined however the services who offered no training has reduced from 25% (2016) to 7% in HCP and 4% in CHSP. [28]

The dramatic change may be the result of multiple factors that include:

- The pandemic
- Responses anticipating recommendation of the Royal Commission into Aged Care Quality and Safety

[27] Who uses residential aged care now, how has it changed and what does it mean for the future? Diane Gibson Australian Health Review, 2020, doi:10.1071/AH20040

[28] The Aged Care Workforce, 2016 March 2017 Department of Health

- The need to retain staff in all occupations
- A greater emphasis on Commonwealth training initiatives (see 2.8.6).

Table 25: Training places provided to residential aged care workforce 2020

Training	% facilities offering this training	Places per RN	Places per EN	Places per PCW/SW
Infection Prevention Control (IPC)	90%	1.6	1.74	1.37
Dementia Care	82%	0.46	0.44	0.47
Medication	82%	0.58	0.57	0.25
Elder Abuse	88%	0.65	0.76	0.7
Wound Care*	71%	0.46	0.42	0.24
Palliative Care	64%	0.34	0.3	0.21
Falls Risk	64%	0.38	0.38	0.34
Diversity Awareness	62%	0.43	0.4	0.42
None	5%	N/A	N/A	N/A

Source: 2020 Aged Care Workforce Census Report Department of Health

*Includes: Wound Care: Wound Assessment/Care, Pressure Injury Risk Assessment & Skin Integrity

Table 26: Training places provided to HCP workforce 2020

Training	% HCP providers offering this training	Places per RN	Places per EN	Places per PCW /SW
IPC	80%	1.89	5.34	0.79
Dementia Care	55%	0.31	0.42	0.28
Medication	62%	0.48	0.62	0.43
Elder Abuse	59%	0.53	1.13	0.4
Wound Care*	34%	0.38	0.4	0.1
Palliative Care	24%	0.19	0.14	0.07
Falls Risk	38%	0.32	0.48	0.23
Diversity Awareness	43%	0.25	0.34	0.25
None	7%	N/A	N/A	N/A

Source: 2020 Aged Care Workforce Census Report Department of Health

*Includes: Wound Care: Wound Assessment/Care, Pressure Injury Risk Assessment & Skin Integrity

Table 27: Training places provided to CHSP workforce 2020

Training	% CHSP providers offering this training	Places per RN	Places per EN	Places per PCW/SW
IPC	80%	0.86	0.81	0.8
Dementia Care	55%	0.14	0.15	0.33
Medication	59%	0.34	0.33	0.53
Elder Abuse	56%	0.5	0.44	0.48

Training	% CHSP providers offering this training	Places per RN	Places per EN	Places per PCW/SW
Wound Care*	29%	0.4	0.47	0.11
Palliative Care	20%	0.21	0.13	0.05
Falls Risk	34%	0.26	0.32	0.22
Diversity awareness	40%	0.09	0.1	0.26
None	4%	N/A	N/A	N/A

Source: 2020 Aged Care Workforce Census Report Department of Health

*Includes: Wound Care: Wound Assessment/Care, Pressure Injury Risk Assessment & Skin Integrity

Aboriginal and/or Torres Strait Islander clients – training requirements

Factors required for Indigenous Australians to achieve positive outcomes from training: "community ownership and involvement; Indigenous identities, cultures, knowledge and values; true partnerships; flexibility in course design, content and delivery; quality staff and committed advocacy; student support services; funding and sustainability. All of these themes and factors are closely interrelated. A number of the reviewed studies find that if the factors from each of the seven theses are incorporated comprehensively into the relevant context, the outcomes achieved by the students will be much greater than if only 'bits and pieces' had been applied in an ad hoc way or not at all. It must be emphasised that limited or poor implementation of any of these factors will act as a barrier to the effectiveness of training programs and the achievement of positive outcomes for Indigenous Australians."[29]

2.8.4 No Minimum Entry Level Qualifications

To deliver residential aged care and HCP, providers must be Approved Providers under the Aged Care Act 1997. The Aged Care Quality and Safety Commission is responsible for assessing and making decisions on applications from organisations seeking to become an approved provider under Aged Care Quality and Safety Commission Act 2018 (Commission Act). Approved Provider organisations are approved through an exacting process that covers all aspects of the service: governance, business planning, financial viability, suitability of key personnel, clinical care and evidence of understanding and being able to deliver the services according to the Act, the regulations, Quality of Care Principles and the program requirements.

Within this context, the Approved Provider must ensure that the workforce is skilled and qualified to provide safe, respectful and quality care and services. There are currently no minimum standard qualifications for entry-level care and support workers.[30] The Approved Provider organisation may require formal qualifications to ensure that their workforce is skilled and qualified and able to provide safe, respectful and quality care and services. It is an Approved Provider's duty to support staff so they can provide quality of care; this includes training and development.

2.8.5 The Royal Commission into Safety and Quality Workforce Recommendations

The recommendations of the Royal Commission into Safety and Quality highlight the critical role that minimum standards, ongoing training and minimum hours of support play in achieving the reforms required to improve safety and quality for older Australians accessing aged care. The recommendations provide guidance for this project as they telegraph current and future reforms that will increase the need for quality training as imagined in the COE.

In May 2021, just prior to the change of government, the then Coalition government responded to the Royal Commission into Safety and Quality. Regardless of the headlines at the time indicating that the government would adopt the Commission's recommendations, the government's actual responses were in many key areas qualified, unclear or contradictory. The government's responses have been included in the following discussion to provide a more nuanced understanding of the changes.

[29] Miller C (2005). Aspects of Training that meet Indigenous Australians' Aspirations: A systematic review of research. National Centre for Vocational Education Research
[30] https://www.health.gov.au/topics/aged-care-workforce/getting-into-the-workforce

A key finding is that: at this stage the minimum qualification requirements recommended by Royal Commission for entry level staff have not been enacted. The emphasis in the Government response is to make the Approved Provider more accountable and manage the accountability through enforceable audit processes and to provide additional support in developing the workforce at all levels.

Recommendation 14: A general duty to provide high quality and safe care. Accepted by the Government that; 'Any entity that facilitates the provision of aged care services funded in whole or in part under the new Act should have a duty to ensure that any worker whom it makes available to perform personal care work has the experience, qualifications, skills and training to perform the particular personal care or nursing care work the person is being asked to perform'.

Recommendation 76: Accepted by the Government relating to Aged Care Workforce Industry Council Limited. Commissioner Briggs recommended: By 30 June 2022, the Aged Care Workforce Industry Council Limited should:

a. review the qualifications and skills framework to address current and future competency and skill requirements and to create longer-term career paths for aged care workers, in conjunction with the work to be undertaken to seek review of award rates in aged care

b. review all aged care occupational groups, jobs and job grades to ensure they reflect the skills, capabilities, knowledge and competencies as well as the structure required in the new aged care system

Aged Care Workforce Industry Council Limited has since ceased operating (August 2023). It is likely that the recommendations relating to the Aged Care Workforce Industry Council Limited will be managed by the Government in another manner.

Recommendation 77: National registration scheme. The Government accepted this recommendation 'in-principle'. The recommendation was that:

1. By 1 July 2022, the Australian Government should establish a national registration scheme for the personal care workforce with the following key features:

   a. a mandatory minimum qualification of a Certificate III

   b. ongoing training requirements

   c. minimum levels of English language proficiency

   d. criminal history screening requirements

   e. a code of conduct and power for a registering body to investigate complaints into breaches of the Code of Conduct and take appropriate disciplinary action*.

This recommendation has not yet been implemented accept for criminal history screening and a code of conduct.

* On the 1st of December the Aged Care Safety and Quality Commission Code of Conduct for Aged Care came into effect. The primary accountability at provider level continues to sit with the Approved providers who have responsibilities under the Aged Care Act 1997 (the Aged Care Act) to comply with the Code and take reasonable steps to ensure that aged care workers and governing persons comply with the Code

It is worth noting that the Government has been able to respond to some parts of the recommendation while being unwilling to respond to other elements.

Recommendation 78: Mandatory minimum qualification for personal care workers

1. A Certificate III should be the mandatory minimum qualification required for personal care workers performing paid work in aged care.

2. Commissioner Briggs: If a Personal Care Worker National Board is established, it should establish an accreditation authority to: This recommendation is subject to further consideration through the development of the whole-of-government Care Workforce Strategy:

   a. develop and review accreditation standards for the mandatory minimum qualification

b. assess programs of study and education providers against the standards

c. provide advice to the National Board on accreditation functions.

3. Commissioner Briggs: The National Board should approve the accredited program of study, and review the need for personal care workers in home care to have specialised skills or competencies.

The Government response 'subject to further consideration' – this response could mean anything or nothing.

Recommendation 79: Review of certificate-based courses for aged care

A By January 2022, the Aged Care Services Industry Reference Committee, working with the Australian Government Human Services Skills Organisation as required, should:

a. review the need for specialist aged care Certificate III and IV courses, and

b. regularly review the content of the Certificate III and IV courses and consider if any additional units of competency should be included.

The Government accepts this recommendation. A review of the Certificate III in Individual Support and the Certificate IV in Ageing Support is currently underway and is due to be completed by mid-2021.

This acceptance of the recommendation seems to be because the review is part of ongoing administrative arrangement rather than a commitment to a package of reforms with aim of ensuring minimum standards.

Recommendation 80: Dementia and palliative care training for workers

By 1 July 2022, the Australian Government should implement as a condition of approval of aged care providers, that all workers engaged by providers who are involved in direct contact with people seeking or receiving services in the aged care system undertake regular training about dementia care and palliative care.

The Government accepts this recommendation. The Government supports training for aged care workers in both dementia and palliative care. The Review of the Aged Care Quality Standards will consider appropriate regulatory levers to require providers to ensure staff are appropriately trained. The reviewed Certificate III in Individual Support (Ageing) will require units of study on dementia and palliative care.

Note onus is on the Approved Provider. The Government's initiatives provide options for this training section 3.6.6 snapshot of Workforce Development initiatives and Incentives

Recommendation 81: Ongoing professional development of the aged care workforce

From 1 July 2021, the Australian Government and the States and Territories, through the Skills National Cabinet Reform Committee, should fast-track the development by the Australian Industry and Skills Committee of accredited, nationally recognised short courses, skills sets and micro-credentials for the aged care workforce. The courses should be designed to:

a. improve opportunities for learning and professional development, and

b. upgrade the skills, knowledge and capabilities of the existing workforce.

The Government accepts this recommendation. Developing and funding nationally recognised micro credentials and skill sets, in addition to full qualifications, is identified as a priority area for reform for the future National Skills Agreement in the Heads of Agreement for Skills Reform signed by all jurisdictions in July 2020. In October 2020, Skills Ministers approved a new framework for prioritising and accelerating the review and development of Vocational Education and Training (VET) qualifications including short courses and skill sets (or micro-credentials).

Note the section 3.6.6 snapshot of Workforce Development initiatives and Incentives.

Recommendation 114: Immediate funding for education and training to improve the quality of care

The Government accepts this recommendation and is responding through the measures Workforce - Growing a skilled, high-quality workforce to care for older Australians and Residential Aged Care Services and Sustainability - Reforming residential care funding to drive better care and a viable system.

Note 2.8.6 Snapshot of Workforce Development Initiatives and Incentives.

2.8.6 Snapshot of Workforce Development Initiatives and Incentives

Better and fairer wages for aged care workers

A 15% wage increase (effective 30 June 2023) has been provided to the aged care workforce Australia wide. This is the most significant investment in the development of the aged care workforce ($11.3b).

Home Care Workforce Support Program

The Home Care Workforce Support Program provides subsidised training and supported work placement opportunities for home care workers. In WA this is delivered through the Care Community Initiative fund. The program is part of a national initiative that focused on assisting the home care sector to increase the size of the personal care workforce. The Commonwealth Government is providing $91 million in grants to attract, train and support the retention of an additional 13,000 personal care workers to the home care sector by March 2024.

In WA the Care Community Initiative is delivered by a consortia comprising Amana Living, North Metropolitan TAFE, South Metropolitan TAFE and Programmed (recruitment service - staffing and labour hire). Care Community Initiative activities are intended to:

- Recruit new home care workers
- Offer training opportunities
- Support providers (this includes following up support workers and to pre-screen to ensure suitability for the work)

The Equip Aged Care Learning Modules

The Equip Aged Care Learning Modules are short online learning modules developed by the University of Tasmania. They are available free-of-charge to aged care workers, volunteers, caregivers and anyone with an interest in improving care for older adults. There are currently 14 modules available.

The Care and Support Campaign

The Australian Government's 'A Life Changing Life' campaign aims to generate interest in the care and support sector, which includes aged care, disability support and veterans' care. It prompts students, job searchers and professionals who have the qualities and skills the sector needs to take action and consider a job or career in care and support.

Aged Care Industry Labour Agreement

Aged Care Industry Labour Agreement supports skilled migration offering permanent residency. The positions in this scheme have a lower salary threshold than in the broader skilled migrations schemes thus facilitating opportunities for direct support workers. In addition the scheme also has a lower English literacy threshold. The agreement involves; Government, Unions and the Employer.

Fee-free TAFE

Fee-free TAFE includes aged care qualifications such as: Certificate III in Individual Support (Ageing), Certificate III in Individual Support (Ageing, Home and Community), Certificate III in Individual Support (Home and Community) and Certificate IV in Ageing Support. Fee-free places will target priority groups including: First Nations people, young people, job seekers, unpaid carers, women in non-traditional fields of study people with disability.

The Australian Government delivers this initiative in partnership with all the states and territories. The initiative is delivering 180,000 Fee-Free TAFE and vocational educational places at a cost of $1 billion from 1 January to 31 December 2023.

The Fee-free TAFE initiative will continue beyond 2023.

Dementia care training

The Dementia Training Program will upskill more aged workers in dementia care. Dementia Training Australia deliver this nationally accredited program.

Palliative care training

Three national palliative care projects are expanding to include residential aged care worker training. This will help older people receive better quality palliative and end-of-life care.

Nurse clinical placements and leadership

This initiative supports nurses to enter the aged care sector and build their careers in clinical and management leadership through:

- Transition to practice programs
- Clinical placements
- Scholarships

Fee Free in '23

Fee Free in '23 includes aged care training available through the WA State Government (Jobs and Skills WA), co-funded by the Commonwealth government. Eligibility criteria:

- school leavers (2023 year 12 students are eligible from Oct 23rd onwards)
- primary place of residence in Western Australia
- and either, an Australian citizen; or a permanent visa holder or holder of visa subclass 309, 444, 449, 785, 786, 790, or 820; or a dependent or spouse of the primary holder of a visa subclass 457 or 482**; or a bridging visa holder who has made a valid application for a visa subclass 866; or a bridging visa E holder (subclasses 050 and 051) who has made a valid application for a visa subclass 785 or 790.

First Nations people, young people, people out of work or receiving income support, unpaid carers, people with disability, and women facing economic insecurity are particularly encouraged to take advantage of this opportunity for fee free training.

Table 28: Fee Free in 23

Institutions		
TAFE	**Private training providers**	
Central Regional	A.M.A Service (WA) Pty Ltd	Industry Skills Training
South Regional	A.T.S. Arrow Training Services	Insight Training Group Australia Pty Ltd
North Metro	Amana Living Training Institute	Institute of Health and Nursing Australia
South Metro	ATC Work Smart Inc	LearnEd Training Pty Ltd
	Auscare Staffing Agency Pty Ltd	Max Solutions Pty Ltd
	Australian Employment and Training Service	Skills Strategies International Pty Ltd
	Australian Higher Education Academy Pty Ltd	Stanley College
	Bestwest Care	Strategix Training Group Pty Ltd
	Brisbane Career College Pty Ltd	TPG Training Pty Ltd
	Health Link Training	Training Unlimited Pty Ltd

Source: https://www.jobsandskills.wa.gov.au/skillsready#frequently-asked-questions accessed 14/07/23

2.8.7 Service Map

Table 29 details the VET providers offering courses relevant to the aged care workforce that physically operate in the primary and secondary catchments[31]. Obviously there are many more providers offering competency training in to candidates in the catchments who deliver in a digitally based mode or provide physical classroom in locations outside the catchment.

This table details the documented VET providers with a physical presence in the catchment. Technically any RTO located anywhere in Australia could offer online training to candidates in the catchment.

Table 29: VET providers

Provider	Location	Qualification	Duration	Training Mode
REACH for Training (RTO)	Mandurah	Cert III in Individual Support (Ageing)	Up to 25 weeks	Blended mode
		Cert IV in Aged Care Support	Up to 30 weeks	Blended mode
		Cert III in Community Services	Up to 20 weeks	Blended mode
		Cert IV in Community Services	Up to 26 weeks	Blended mode
		Diploma in Community Services	Up to 42 weeks	Blended mode
		Cert III in Individual Support (Home & Community)	Up to 24 weeks	Blended mode
South Metro TAFE	Mandurah	Cert IV in Community Services		On campus & online
		Diploma in Community Services		On campus & online
	Mandurah, Rockingham	Cert III in Community Services		On campus & online
		Cert III in Individual Support (Ageing, Home & Community)		On campus
Skills Strategies International (RTO)	Mandurah	Cert III in Individual Support (Ageing)		Classroom
		Cert III in Community Services		Campus & online
		Cert IV in Community Services		Campus & online
		Diploma in Community Services		Campus & online
		Cert III in Individual Support (Ageing, Home & Community)		Campus & online
Training U (RTO)	Peel	Cert III in Individual Support (Ageing)	15 weeks	
ATC Work Smart (RTO)	Bunbury	Cert III in Individual Support (Ageing)		Traineeship
Insight Training Group Australia (RTO)	Rockingham	Cert II in Health Support Services	Flexible	Online, work-based
		Cert II in Community Services		
		Cert II in Introduction to Aged Care		
		Cert II in Community Health & Wellbeing		
		Cert III in Individual Support (Ageing)	Traineeship option	Classroom

[31] www.training.gov.au accessed 8/9/23

Provider	Location	Qualification	Duration	Training Mode
		Cert III in Allied Health Assistance	Flexible	Classroom
		Cert III in Community Services		
		Cert III in Allied Health Assistance		
		Cert III in Health Support Services		
		Cert IV in Ageing Support	Flexible, traineeship option	Classroom & placement
		Cert IV in Community Services		
		Cert IV in Allied Health Assistance		
		Diploma in Community Services		
South Regional TAFE	Bunbury	Cert II in Community Services	Traineeship	Full time or part time
		Cert IV in Community Services	Traineeship	Full time
	Bunbury, Busselton	Cert III in Community Services	Traineeship	Full time or part time
	Bunbury, Busselton, Collie, Harvey, Manjimup, Margaret River	Cert II in Health Support Services		
		Cert II in Health Services Assistance		
		Cert IV in Prep for Health & Nursing Studies		
		Diploma in Nursing		
		Skill Set in Administer & monitor intravenous medications for ENs		
	Bunbury, Busselton, Collie, Harvey, Margaret River	Cert III in Individual Support (Ageing)	Flexible, traineeship	Full time or part time
	Collie, Harvey	Cert IV in Ageing Support	Flexible	Full time or part time
	Manjimup	Cert III in Individual Support (Ageing, Home & Community)	Flexible	Part time
Strategix Training Group (RTO)	Rockingham	Cert III in Individual Support (Ageing)	6 months + work placement	Classroom, 2 days pw

Sources: www.southmetrotafe.wa.edu.au/, www.centralregionaltafe.wa.edu.au/, www.southregionaltafe.wa.edu.au/, www.reachfortraining.com.au, www.training.gov.au

2.9 Summary

2.9.1 Basis for Calculating Workforce

Catchment

The primary catchment for a COE is the Peel Region. A secondary catchment has been identified that is also likely to be served by a COE based in Mandurah.

Population growth

The catchment's ageing population characteristics are driving strong demand for aged care services and will continue to drive this demand to 2031 and beyond. The study identifies very high growth of the very old population (85+ years); from 2021 to 2031, +64.8% Peel and +83% in the secondary catchment. The Region's very old population will grow at a faster rate than Perth Metro.

Peel in particular is already (2021 Census) structurally older than Perth Metro when the 55+, 70+ and 85+ populations are examined. This age structure will continue to drive strong demand beyond 2031.

Table 30: Population growth to 2031

Area	Age 55+	From 2021 % change	Age 70+	From 2021 % change	Age 85+	From 2021 % change
Peel catchment	63,610	+25.1%	27,340	+18.9%	5,755	+64.8%
Secondary catchment	143,720	+35.2%	63,650	+50.7%	11,715	+83.0%
Total catchment	**207,330**	**+32.0%**	**90,990**	**+39.5%**	**17,470**	**+76.6%**
Perth Metro comparator	**764,275**	**+32.7%**	**338,765**	**+45.0%**	**63,520**	**+55.5%**
WA	**973,025**	**+31.0%**	**435,440**	**46.8%**	**80,435**	**60.4%**

Source: WA Tomorrow Population Projections Report 11 Band D

Aged care supply and demand – residential aged care

The catchments are currently undersupplied in relation to residential aged care places. The growth in absolute numbers and as a proportion of the population aged 85+ years will continue to drive strong demand for additional places. Regardless of preference of older people to remain at home as they age, other factors will offset this preference including:

- A reduction of the proportion of unpaid (family) carers as detailed in 2.5.2
- Increasing length of life will result in higher numbers of persons living with dementia and the accompanying impact on behaviours/complexity that require management in a residential setting
- An increased role in residential aged care to provide palliative care (in 2021-22 most exits from permanent residential care were due to death, at 86% of exits)[32]
- With increased length of life, more people will require technical nursing relating to comorbidities including the management of mental health and dementia in the last years of their lives

The table below uses the 70+ population as this population is currently used by the Commonwealth for setting planning ratios. The table demonstrates that by 2031:

- The Peel Region will require an additional 954 places (beds) requiring a $323,446,680.00 capital investment
- The secondary catchment will require an additional 2,400 places (beds) requiring a $813,667,800.00 capital investment
- The total for the catchments will be 3,354 places (beds) requiring a $1,137,114,480.00 capital investment

Growth in residential aged care will translate into the demand for a trained and qualified workforce. In the case of residential aged care it will also drive the demand for a building and construction workforce.

[32] AIHW GEN Data: People leaving aged care – Reason for Leaving Aged Care, Number of exits by care type and discharge reason 2021-22

Table 31: Residential aged care demand 2031 – new places

Area	70+ Population	Total Demand	New Places to meet demand
Peel catchment	27,340	1,859	954
Secondary catchment	63,650	4,328	2,400
Total catchment	**90,990**	**6,187**	**3,354**
WA	**435,440**	**29610**	**11,323**

Sources: Calculated by FMA using the Aged Care Services List 2023, ABS Census 2021, WA Tomorrow population projections (Band D) 2026, 2031, Published and estimated benchmark data described in the notes to Table 12.

Aged care supply and demand – HCP

Growth of the HCP program is documented in the table in this section. HCP provides gradated funding according to assessed need. In the event that residential aged care places are not developed to the extent estimated, the HCP program may grow at a faster rate than detailed below.

Table 32: Supply and demand for HCP 2031

Area	Places	Operational places per 1,000 70+	Benchmark places per 1,000 70+	New places required by 2031
Peel catchment	1,695	62	62	312
Secondary catchment	3,946	62	62	947
Total catchment	**5,641**	**62**	**62**	**1,258**
WA	**26.997**	**62.0**	**62.0**	**5,985**

Sources: See notes Table 14

Aged care supply and demand – CHSP

By 2031 the number of CHSP clients has been estimated (based on the growth of the 65+ population) as:

- Peel: 5,722; a growth of 16.3% (2021 to 2031)
- Secondary catchment: 12,810; a growth of 20.5% (2021 to 2031)
- Total: 18,532; a growth of 19.1% (2021 to 2031)

2.9.2 Aged Care Workforce

Each of the aged care programs requires a different ratio of workers to participant ratio. In community care (HCP and CHSP) this is based on funding levels related to assessed need; the estimated mix of service levels determines the workforce requirements. In residential aged care the mandated minutes of care requirements relating to the care workforce is the basis for the calculation.

Table 33 details an aggregation of the workforce required to meet growth in services and to replace the retiring workforce across the three major aged care programs. There will need to be a significant lift in the training capacity and capability in the Peel and Secondary catchments and more broadly across WA to respond to this demand.

Table 33: New workers required by 2031

Area	Occupation	Growth to 2031	Retiring 2021 to 2031	Total new by 2031
Peel catchment	RN	190	62	252
	EN	105	24	130

Area	Occupation	Growth to 2031	Retiring 2021 to 2031	Total new by 2031
	PCW/SW	786	341	1,128
	Total	1,082	428	1,510
Secondary catchment	RN	566	139	705
	EN	290	65	355
	PCW/SW	3,081	974	4,055
	Total	3,937	1,178	5,115
Total catchment	**RN**	**754**	**201**	**955**
	EN	**395**	**93**	**488**
	PCW/SW	**3,860**	**1,492**	**5,352**
	Total	**5,009**	**1,786**	**6,795**
WA Total	**RN**	**2,789**	**790**	**3,579**
	EN	**1,479**	**364**	**1,843**
	PCW/SW	**13,530**	**5,883**	**19,414**
	Total	**17,798**	**7,038**	**24,836**

Source: Aggregation of Table 19, Table 20 and Table 21 (see notes on each table)

2.9.3 Allied Health Workforce

In addition to the workforce comprising of RNs, ENs and PCW/SW there will also be demand for an increased allied health workforce. It is estimated that by 2031 the increase will be as follows:

- Peel: an additional 413 practitioners (+94.3% 2021 to 2031)
- Secondary: an additional 517 practitioners (+36.2% 2021 to 2031)
- Total: an additional 930 practitioners (+49.8% 2021 to 2031)

This workforce requirement is not exclusively for aged care. This is a calculation for all age groups and care needs.

2.9.4 Training the Aged Care Workforce

High current and future demand for training

The only part of the aged care workforce with mandated qualifications is the requirement to have RNs, and for providers to ensure that other clinical care is provided by a person with the appropriate qualification to support the clinical need being addressed.

The bulk of the aged care workforce therefore does not require a qualification. The onus sits with the provider of aged care to ensure that the appropriate care is being provided and that the care is provided by people with appropriate qualification and skills. The degree to which this obligation is being met is audited by Aged Care Quality and Safety Commission. There is no clear indication from the Commonwealth Government if this situation will change when the new Aged Care Act is brought into law. An exposure draft will not be available until later in 2023.

The number of personal care and support workers holding a Certificate III or higher in a relevant direct care field:

- Residential aged care: 66%
- HCP: 63%

- CHSP: 71%

The data suggests that there is a significant growth opportunity in supporting a change in practice and in relation to training the existing care workforce and a very substantial demand for training to support new workers. In addition, in-service training, professional development and training related to achieving higher qualifications all represent opportunities for training in aged care.

The RN workforce in aged care (945 RNs required by 2031) will necessitate substantial university places and given the lead time of at least 4 years, action is required immediately. The other key focus will be to support the current SW and EN workforce to achieve higher qualifications and credentials.

Investment into building the workforce

The WA and Commonwealth Governments have made significant investment into the VET sector to improve the quality and consistency of training and to attract more applicants and graduates including initiatives such as Fee Free TAFE. The most costly and significant initiative is the 15% increase in wages for the aged care frontline workforce (effective July 2023).

Current training service system

The VET service system supporting the catchments includes both TAFEs and RTOs. There eight organisations with a physical presence in the catchments, four each in Peel and the broader secondary catchment. Many more RTOs offer fully online VET training; theoretically these providers could be anywhere in Australia, and accordingly these providers have not been included in the service mapping.

3 Consultations

3.1 Introduction

In line with the project consultation plan, Faircloth McNair & Associates engaged with a broad range of stakeholders to seek input and perspective on:

- current and future aged care workforce demand
- quality of current training offerings, observed as job readiness
- critical aged care workforce training issues
- what an aged care training centre of excellence in Mandurah may look like

A total of 31 individuals were consulted, representing 22 stakeholder organisations.

Table 34: Breakdown of consultation participants

Organisation Type	Organisations	Number Individuals Consulted
Consultants	2 approached, none consulted	3 approached, none consulted
Govt dept/entity	4 approached, 4 consulted	9 approached, 5 consulted
Peak/sector body	7 approached, 4 consulted	8 approached, 5 consulted
Aged care service providers	20 approached, 9 consulted	27 approached, 13 consulted
RTO	2 approached, 1 consulted	2 approached, 1 consulted
TAFE	2 approached, 1 consulted	5 approached, 3 consulted
University	4 approached, 3 consulted	10 approached, 3 consulted
Total	41 approached, 22 consulted	64 approached, 30 consulted

In addition, a workforce survey elicited 14 responses.

Table 35: Characteristics of workforce survey respondents

Type of aged care facility	Years working in the sector	Training/qualifications completed
Community/NFP: 9 Private: 4 Government: 1	0-5 years: 9 6-10 years: 0 11-15 years: 1 15+ years: 4	Cert III: 7 (Individual Support (Ageing, Disability, Home & Community Care), Residential Care Cert IV: 2 (Leisure & Lifestyle, Diversional Therapy, Assistance in Nursing) Diploma/EN: 2 RN: 3 (2 currently studying)

The following section is a narrative that includes findings, other corroborating evidence and quotes.

About the consultation responses

To augment the consultations, corroborating evidence and extended narrative from the literature has been included where FMA considers that this evidence adds to the particular theme being explored through the consultations

3.2 Responses

3.2.1 Workforce Shortages

All respondents identified that workforce shortages were currently a significant factor impacting/limiting service delivery and the shortages will be a factor influencing the capacity to grow into the future. In addition respondents identified more acute problems in rural areas and regional towns. One respondent stated that "Many RAC beds around Mandurah are closed due to lack of workforce".

In the catchment, two providers (Amana Living and Coolibah Care), have active recruitment and training initiatives to address residential aged care workforce shortages enabling sufficient workforce capacity to meet requirements. Community care however remains particularly problematic for all those consulted, as does limited access to allied health professionals.

Particular comments were made regarding categories of the workforce and the impact of shortages or scarcity that included in the following discussion.

RNs

All respondents identified that it is very difficult to recruit RNs. One respondent reported that they had advertised for a year and had had no responses. Reasons provided by respondents relating to the shortages include:

- There is competition for RNs with the health sector eg there is high demand for RNs in health due to the way the ageing population is driving high demand for health services
- Aged care is not considered "sexy" to graduating RNs
- University training favours career choices in health; examples provided included course content, placement options, assessment case studies
- Aged Care regulations now require 24/7 RN coverage in residential aged care and minimum care minutes resulting in requirement to recruit more RNs across the aged care sector. It is considered that the requirements may restrain growth of residential aged care services without more RNs coming into the sector
- RNs are leaving residential aged care due to: excessive regulatory control, additional pressure relating to supervising support workers who have been inadequately or poorly trained, the people management requirements of the role (not included in nurse education)

ENs

Respondents provided less clarity regarding shortages of ENs and offered far more commentary on the future of the role, the value of the current EN workforce and the potential for the EN workforce to be supported to achieve further qualifications to resolve the RN shortages. Particular response themes or comments include:

- ENs in residential aged care can't be counted in RN minutes but are paid more than PCW – some respondents commented that "reluctantly we will have a reduced role for ENs due to the requirement of minimum minutes and the way the minutes are counted and funded" another stated that "retaining the experience in aged care and their leadership role is vital and it is short sighted". Others identified that the *pathway to practice* up-skilling program is important to retain this group. One provider cautioned that the EN role "should not be written off, it's still an important part of the aged care workforce, and ENs can meet some clinical requirements"
- A strong feature of commentary included the need to "get the pipeline in place" eg to support EN transition to RN; commentary is provided in the section **Importance of career/training pathways**
- The Dept of Health and Aged Care advised that they are now asking providers to report EN minutes, although they do not count as RN minutes. It hoped that reporting will highlight the unique contribution of ENs

Personal care workers and support workers

Multiple factors were identified regarding the availability of the support workforce (includes suitable persons) this includes;

- An overall tight employment market resulting in competition across multiple sectors
- The positive impact of a number government initiatives regarding workforce development particularly lifting the pay rates by 15%
- One provider said "if they have a heartbeat we employ them" however another stated that the extreme shortages experienced in 2021 have begun to be moderated by the Fair Work determination that lifted aged care support workers' pay rates by 15%
- The broader impact of the socioeconomic factors affecting support workers including lack of housing, travel/commute to work, casualisation, working multiple jobs potentially over multiple sectors: staff "shop around" for rosters that suit their life, and tend to work across multiple employers
- There's a high dependence on agency staff, who are paid a higher rate (ties in with structural issues due to casualisation of the workforce)
- There are significant numbers of CALD workers, many for whom English is a second language and who may not be suitable to support all clients
- One provider commented that they are advertising on Seek all the time, currently recruiting to fill 60 shifts per week
- One provider reported that they don't have any trouble recruiting in Mandurah (small facility, good culture, low turnover) but definitely have workforce supply issues in Bunbury
- Money and flexibility are important elements for many support workers

Allied health

Respondents frequently identified significant challenges in attracting and retaining an allied health workforce. Key observations and suggestions include:

- There is a reliance on brokered allied health practitioners to support care needs of recipients
- Some providers are relying on allied health practitioners travelling from Perth; this has greater consequences for the rural parts of the secondary catchment

Literature identifies the benefit of increasing the contributions of clinical staff including allied health in residential aged care:

> *"…evaluated the costs and effects of enhanced staffing levels, including increasing the amount of direct nursing care time for each resident, employing a fulltime occupational therapist, increasing the staffing level of both physical and occupational therapists, and implementing off-hours physician coverage via telemedicine.*
>
> *Results suggest that enhanced staffing levels, whilst being associated with increases in staffing costs provide the potential for cost savings in other areas. For example, one study found that increasing registered nurse staffing in nursing homes to ensure 30–40 min of direct care time per resident per day reduced the incidence of pressure ulcers, hospitalisations, and urinary tract infection rates resulting in a net societal benefit of US$3191 per resident per year"* [33]

Allied health assistants

During discussions about the challenges related to delivering care services provided by allied health professionals, respondents provided feedback in relation to allied health assistants that included:

- Allied health assistants are a valuable workforce and underutilised
- Allied health assistance is a growth opportunity in residential aged care, community care and respite (although there are challenges with work placement/supervision)

[33] Easton T, Milte R, Crotty M & Ratcliffe R (2016). Advancing aged care: a systematic review of economic evaluations of workforce structures and care processes in a residential care setting. Cost Eff Resour Alloc (2016) 14:12

Aboriginal Workers

There is a preference to recruit and train Aboriginal people to support members of the Aboriginal Community in the catchments. The availability of Aboriginal workers supports older Aboriginal to more readily accept aged care services with attendant impact on their health and functioning as they age.

Skilled migration to address gaps

Skilled migration isn't a simple solution as there a number factors and dynamics that have to be considered including factors that impact the viability of this solution, including:

- The $75,000 up front cost to a provider in bringing as single RN to Australia from the UK
- English as a Second Language presents challenges with translation of policies etc as well as communication with clients
- It's good to have cultural diversity to meet cultural needs, and it's a good opportunity to expand the workforce and meet needs of CALD clients but does require training to meet local (Australian) standards
- Many providers are seeing skilled migration as a last resort, however the rubber will hit the road when ratios increase at the end of the year; many will seek to meet the gap through skilled migration
- One provider commented that they may consider skilled migration in the future, but would need to improve entry pathways, in-country training and/or local training (including ESL & Australian culture)
- PALM scheme brings in aged care workers from nine Pacific island countries and Timor-Leste for minimum 1 year and up to 4 years, but the aged care provider needs to ensure suitable accommodation is available
- Reported that at least one provider has an international recruitment strategy ready to implement
- Screening in country of origin is preferable but current processes are not always effective
- There are often gaps in cultural and language/literacy skills – need pre-employment preparation/training
- There is a lack of housing options for incoming skilled migrants

The Committee for Economic Development of Australia (CEDA) state[34] that: 'Workforce shortages in the aged-care sector are driving low occupancy rates and many facilities are unable to operate at full capacity. Summarising their report findings as:

- In March 2023 the average occupancy rate across all residential aged-care places was 86%
- Regional areas are the most affected, with some residential facilities operating at a capacity of just 50%
- Industry data shows that agency costs per bed day have more than doubled since 2022 – to $17.04 per bed day in March 2023 from $7.18 per bed day in March 2022.
- Job vacancies in health care and social services remain the highest of any industry – showing the widespread demand for workers
- The lack of capacity in aged care facilities is adding pressure to hospitals. In NSW from Dec 2021 to Jun 2022 the number of regional patients awaiting discharge to an aged-care facility nearly tripled. ***Note:*** *The Peel Health Campus confirms that a lack of suitable aged care places is resulting in the hospital housing older people who should be cared for in aged care.*
- Data from the Department of Health and Aged Care shows that 53% of all aged-care facilities are operating at a loss'

[34] CEDA (2023). Duty of care: Aged-care sector running on empty

3.2.2 Training and Quality

Common to all respondents was the view that Certificate training was of an inconsistent quality. One respondent stated that "they arrive with a Cert III and then the training begins" and "the poor preparation is a particular problem in community care as the workers deliver the service independently". These responses mirror literature that states:

> *"The key issues being experienced in the VET sector by those who participated in the Review can be summarised as follows:*
>
> - *Continuing variations in quality between providers, and concerns about the relationship between the regulator and providers.*
> - *A cumbersome qualifications system that is slow to respond to changes in industry skills needs.*
> - *A complicated and inconsistent funding system that is hard to understand and navigate, and which is not well matched to skills needs.*
> - *A lack of clear and useful information on vocational careers for prospective new entrants.*
> - *Unclear secondary school pathways into the VET sector and a strong dominance of university pathways.*
> - *Access issues for Aboriginal and Torres Strait Islander Peoples and second chance learners seeking skills that will help them obtain and stay in meaningful work."*
>
> *"Recent experiences of poor provider behaviour, unduly short courses and variability in the quality of training have tarnished the sector's reputation. The fallout from the now closed VET FEE-HELP scheme in particular was regularly raised as an issue during the Review. On top of that, there are the broader competitive issues that have been brewing for decades." 35*

Equally, gaps were identified in RN training particularly in relation to geriatric competencies and management/leadership training. Workforce shortages are being addressed in a number of ways in other countries facing similar challenges to Australia with respect to an ageing population as discussed in Nordregio's paper on Recruitment and retention in the Welfare Sector: Nordic good practice:

> *"The most common intervention measures are aimed at increasing the quality of initial education, continuous education and training, improving working conditions, increasing the attractiveness of the workplace, and enhancing the general prestige of social care jobs. In recent years, Denmark, for example, has placed emphasis on reducing the drop-out rates from education by improving internships and ensuring a smooth transition between theory and practice. In elderly care, Sweden has prioritised digitalisation, promoting full-time work, and raising skills levels. In Finland, the focus has been on attracting more students to education and promoting the recruitment of labour from abroad. Norway and Iceland have worked at modernising their study plans for health and social care education, with much more emphasis on improving clinical practice and enhancing internship models."*[36]

Case Study: Coolibah Care, Skilled Strategies and Cert IIII candidates

Skilled Strategies screens candidates to identify those who do not have the necessary social skills or attitude to work in a care role – these candidates are counselled and then work is put in to match them to a more appropriate course/career; likewise those not ready for on the job training are assisted to build confidence/capacity as required. The screening model includes pre-training conducted by Skill Strategies.

Coolibah Care trusts Skill Strategies' process that includes provision of training, coaching and assessment, on the job at Coolibah Care. This process is more difficult from a logistics and efficiency perspective than delivering in the classroom however outcomes are better for all parties. It's a more expensive model but is getting great outcomes for students, Coolibah Care and Skilled Strategies.

Students have great support on site, not just the Skilled Strategies trainer but also getting to know the Coolibah Care staff. Students learn the Coolibah Care culture and way of working while learning the role. At the end of the course, they know what to expect.

The numbers are limited in this model; Coolibah Care can only take 8-10 students at a time.

Skill Strategies and Coolibah Care are currently exploring an option to provide assessment training to experienced care workers so they can assess newly trained staff – particularly in the home care setting.

[35] Dept of Prime Minister & Cabinet (2019). Strengthening Skills: Expert review of Australia's vocational education and training system. Commonwealth of Australia, p 27

[36] Nordregio (2021). Recruitment and retention in the Welfare Sector: Nordic good practice. Policy Brief 2021:1, p 7-8

VET Training

Key statements relating to the quality of VET training includes:

- Access to training is not the issue (lots of RTO and TAFE options available) but the Cert III qualification has missed the mark
- There is a demonstrated need for training in Mandurah; a knowledgeable consultee reported that "the statewide Free in 23 VET Cert III in Aged Care initiative has been the most successful in Mandurah"
- Fully online courses tend to be poorer quality (as measured by job readiness): "I don't see how fully online training can work because there must be job placements to support an assessment of competencies"
- Less prepared (job ready) staff puts a greater load on RNs and is a massive problem in home care. Variability in job readiness is especially an issue with home care
- Shorter courses are challenging and often represent short cuts; this has cleaned up to some extent but there are probably still some poor quality training providers
- A respondent stated that "people are obtaining a Cert III and we wonder, how did they pass this course"; such statements tend to undermine confidence in the Cert III and call into question oversight of the VET sector
- There is an observable difference in the quality of training, this respondent thinks it's about the quality of trainer and the experience and passion they bring to the role (students going into the courses are virtually the same); trainer variability – good trainers are key to good outcomes & are becoming a scarce commodity; good RTOs encourage/support trainers to update skills & maintain contemporary sector knowledge; trainers may not be in touch with on the floor requirements eg may train students to take 30min to make a bed, in reality there's 10min; trainers need to undertake regular industry visits to make sure they are best preparing students
- It is possible that in community care alternate approaches could be used to assessing competencies that may include:
    - Group reflective practice managed by the coordinator/clinician
    - Simulated challenging situations as part of the course design and delivery

RN training

Broadly there is a recognition that RNs entering aged care would benefit from course work that includes geriatric competencies (dementia care, behavioural management, older person's mental health and psychiatric care), preparation for the leadership and management roles and the more independent working environment (lesser role for peer support and resultant professional development). Comments include:

- Examples used in assessment and course work for RNs should not be biased to acute care but equally address aged care
- The use of geriatric and dementia assessments as an opportunity to also develop RN professional practice and skills (some initiatives use Telehealth to support this approach)
- Level 3 Nurse Practitioners have capacity to provide specialist high care (RAC, home & palliative care) and can substitute for GPs where there is a shortage
- Residential Care Line Outreach Service (WA Health) is nurse practitioner led, statewide service providing clinical consultation, care planning & education (eg constipation, wound management, palliative skills)
- In general, aged care placements are undertaken by 1st year RN students (shortest placement); need more Universities to incorporate aged care as a 3rd year placement where students can see how their skills can be applied short term and as a career, this requires systemic change; one provider mentioned they have a structured program to have 3rd year RN students do placements with them
- Need to ensure nursing students/placements have a positive experience including orientation to what the role can become; good placement experiences tend to come down to support and mentoring

cersal view that career pathways are important particularly EN to RN. Particular comments and observations include:

- ENs seeking to become qualified as RNs are in some instances experiencing challenges getting recognition of prior learning that should be granted. Recognition of prior learning would facilitate opportunities to increase the number ENs who graduate as RNs with a preference to work in aged care
- Need to get the pipeline in place to support ENs upskilling to RN
- A respondent stated they had observed positive EN transitions to RN qualification; they know the work and the sector, they want to be part of it, have committed to it
- Providers are recognising that they need to develop their workforce from within (PCW>EN>RN); there is a cost to the organisation but need to weigh up the benefits

In-service training

In-service and professional development is managed internally and externally by providers according to the perceived needs of their staff, funding that supports a particular training initiative and (for some) a structured approach to training. Interestingly no provider mentioned that training responded to identification of needs as a result of their Quality Management System. Selected remarks include:

- Amana Institute – the organisation was already providing a comprehensive in-house targeted training service to address gaps in practical skills; saw the opportunity to transition to offering a commercial training option. Currently offer short courses & micro-credentials to address the gaps between qualifications and what the sector needs.
- Coolibah Care has new training facility, taking initiative in workforce development infrastructure
- One provider reported that they access a number of providers to deliver CPD/in-service training oriented to what the needs are eg Silver Chain for wound management, Amana Institute for dementia training, other e-learning providers; they are looking for good nurse leadership training provider

> *"Micro-credentials in vocational education and training (VET) offer more flexible ways of learning. They also deliver in-time training to meet emerging and urgent skills needs. Micro-credentials support people to move between jobs and industries and can be used as building blocks towards full qualifications."*[37]

Training drop-out rates

At project commencement a drop-out rate of 27% of candidates for Cert III was identified as a concerning factor. Key insights provided by respondents include:

- Consultations reveal more broadly in the VET sector that completion rates for non-licencing certificate training is as high as 52%. Reasons include poor screening for suitability and free TAFE (ie "no skin in the game")
- A number of consultations identified screening for suitability and prequalifying training as good strategies to avoid poor completion rates
- Screening for suitability was also identified with an improved outcomes for graduating students when they engaged in the workplace
- Screening may include: insight into the impact of the work on older people and associated job satisfaction, the challenges of the role, a values alignment with the provider of the service and the Australian Government requirement, English proficiency and literacy, mandatory character screening and police check and a valid driver's licence (community aged care)
- Some training organisations are only interested in their throughputs and are not concerned about outcomes

[37] Dept of Education & Workplace Relations (2023, April 5). Supporting Micro-credentials in the Training System, https://www.dewr.gov.au/skills-reform/supporting-microcredentials-training-system

3.2.3 Need to Change the Perception of Aged Care

A common theme addressed by respondents when discussing aged care workforce shortages was the need to change the perception of potential employees with regard to working in aged care. The response indicates the view that the current perception is a barrier to people entering the sector. Specific comments include:

- The need to demonstrate that aged care nursing is a varied and fulfilling career, with lots of opportunity from early in career
- Aged care nursing needs to be recognised as a speciality and the overriding attitude in RN training shifted (currently biased toward acute care; aged care nursing is seen by many as a pathway to retirement
- COE is a great opportunity to look at making aged care an attractive career option
- Home care is a good (flexible) option for people with young families
- Job Ready pilot (successful, continuing) provided a taster of aged care (3 weeks training, 2 weeks placement) and can lead on to Cert III and/or traineeship
- Perception of working in aged care is changing and will continue to do so as there's greater commitment to research into areas such as dementia and degenerative disease
- Secondary school career tasters demystify and normalise aged care at a critical point in career decision making
- WA Office of the Chief Nurse Officer (OCNO) does not have anyone on staff with aged care nursing experience – the sector will not get any attention while there's no one in this office that understands and advocates for it

3.2.4 Technology

Respondents had a limited perspective relating to the application of technology and how it might change the workplace and/or respond to particular workforce issues. However responses included:

- "Vacant beds" is a local tech innovation: it is a portal where providers regularly update beds available including a suitability profile (eg CALD, dementia, bariatric) to assist hospital discharge planning; it was described as "elegant software"
- AI/technology may aid in monitoring/supervision but it's important that it's not punitive; if AI/technology improves quality of care for older person that would be acceptable
- Technology can't replace the personal nature of caring (to further prompt discussion and insight into this response or reaction Appendix 1 includes a brief summary of **Robots in Aged Care: A dystopian future?[38])**
- For people returning to the workforce, picking up IT is challenging (it's not covered at all in Cert III training)
- Robots like in Japan – no! The sector is immature in its thinking/understanding of what technology can offer & what its impact will/could be
- Technology may be most applicable in training context, may be able to fill gap in home care "supervision"
- The most significant and current gains to be made in aged care using technology are in the use of telehealth and back of house systems

[38] Sparrow R (2016). Robots in Aged Care: A dystopian future? AI and Society, 31:445-454

3.2.5 An Aged Care Training Centre of Excellence in Mandurah

The concept of a Centre of Excellence in aged care training (COE) was universally positively embraced as an opportunity to:

- Improve the quality of training
- Ensure training is meeting the particular needs of the sector
- Manage the sheer volume of need relating to the ageing population
- Bring together Universities, the VET sector, funders, providers, people with a lived experience, policy and research

As such, there was a strong interest in how the vision of the COE would come together and who the partners might be. South Metro TAFE hosts ACEPT (Australian Centre for Energy and Process Training) a world-class, specialist training facility aligned with training requirements of the oil and gas, processing and resources industries.[39] South Metro TAFE have proposed that the ACEPT model may aid development of this initiative and accordingly invited the consultants and project management team to inspect ACEPT. South Metro TAFE identified the governance of ACEPT to be an essential factor in its success.

Many of the respondents lit up with creative ideas about the elements that could be included in a COE and the issues/problems that could be addressed through a COE based in Mandurah:

- A broad COE can assist in changing perception of work in aged care – it's not a static job
- Amana Living's Joondalup Training Institute includes respite in the community which enables supervised community work placement
- Build a provider network to support placements (consistent quality/experience)
- Buying an RTO is subject to quality audit processes (not assumed that the same rating will continue); bringing in an RTO partner would be a more straightforward approach
- Caution – aged care training is complex due to changes especially in home care
- Chamber of Commerce can assist with recruitment
- COE can play a role in changing the perception of working in aged care, including facilitating a structured career pathway
- COE could also play a part in professional development for trainers/lecturers, including industry visits
- COE is worth exploring to see how standard of training could be improved
- COE needs to be a genuine collaboration between all the players (community care, residential aged care, universities, VET, lived experience)
- COE needs to be a marriage of VET, university and industry, and there should be a lived experience voice
- COE needs to be more than just training, needs a strong governance model that includes industry representation to aid in identifying future investment focus in training and infrastructure
- COE provides opportunity to keep locally trained nurses in Mandurah
- COE will need to have plans to attract and support students/workers though completion and work placement, and on to employment

[39] https://www.southmetrotafe.wa.edu.au/specialist-training-facilities/acept

- Aboriginal people want to participate in ground up design
- Consumer voice and input should be included in COE model
- Contribute to meaningful quality of qualifications, so workers are industry ready
- Could/would the COE cover disability support training as well? Qualifications likely to be amalgamated, and having disability knowledge is always helpful in aged care
- Delivery method affects cost base (ie online is less expensive), but can allow flexibility
- Full qualifications can be expensive, so could focus on targeted units
- Graduate support – aged care nurses often go straight into leadership roles
- Include skill development opportunities for nurse practitioners and nurse educators as well
- Incorporating an HR function to support providers would assist with creating a good value proposition for employees, creating "stickiness" ie retention
- Innovations such as onsite childcare enables mothers of young children to do training (also multigeneration model)
- Innovative models of education, multidisciplinary, student-led work
- It would be good to involve people with lived experience (eg older people) in consultation and co-design of COE
- Key features could be: training facility, work placement support, promotion of aged care as a career path, community connection & engagement
- Mandurah location is really well suited for something like this
- Nurses in aged care do not have access to a specialised reference library to support evidence based practice; COE could meet this gap (membership/subscription model)
- Partnership/collaboration with industry "by industry for industry"
- Putting funding aside, the idea has merit – comparison was made to tertiary teaching hospitals, and the T Hotel in Hong Kong which is a real life hospitality training hotel
- COE could host an Ageing Lab which would facilitate strong interface between lived experience, academics and the sector
- Include a day centre and respite services that also serve as an opportunity to assess competencies for community support workers candidates undertaking work placement
- Develop a dementia village model as part of a demonstration of innovation including the application of technology
- Consider Murdoch Health & Knowledge Precinct model (includes Murdoch Uni, SM Metro TAFE, hospitals, Aegis aged care & medihotel)
- Recruitment services could be integrated into the model
- A place based model may support improved local recruitment and reduce turnover
- The Commonwealth's initiatives regarding development of place based cooperatives and mutuals may lend to and support the establishment of multi-stakeholder buy-in and ownership/governance

3.2.6 Other

Other notable themes include:

- An effective aged care sector reduces hospital bed days, enabling cost savings and better outcomes for individuals
- BLCW Triangles of Change – RTOs, employment services, employers working together in a specific geographical area eg effective in Geraldton
- Emotional intelligence and relationship building is key to doing well as a care worker (and enjoying the work)
- Lack of housing needs to be addressed (students and workforce)
- Observed that many aged care workers have chaotic lives; employer chaplaincy/welfare focus is a key to retention

4 Vision for a Centre of Excellence

4.1 What is a Centre of Excellence

The description of a COE in management and research literature is not consistent and varies according to the context. The definition provided in this section is drawn from the following experiences and sources:

- The author's role as a Director of the Difference Incubator – The Difference Incubator works in disruptive system change, co-design and prototyping to promote social enterprise
- The author's role as a member of a Better Ageing Lab for 18 months 2021/22
- Australian Research Council (ARC) – the funder of many of Australia's Centres of Excellence
- Five Guiding Principles of a Successful Centre of Excellence[40]
- TAFE Centres of Excellence; a good mechanism to foster partnerships[41]

Definition

A Centre of Excellence is a model or concept that is widely used and applied across many different sectors and Industries. A COE is a typically small team of dedicated individuals managed from a common central point, separate from the functional areas that it supports within an area/field of practice, sector or organisation.

The focus of a COE may be to provide leadership and bring together knowledge and expertise. Commonly the COE addresses complex issues through drawing on evidence, applying new thinking, co-design and design thinking. A COE will test, demonstrate and rapidly and flexibly redesign (prototype) to support the adoption of practices that solve the complex issues or improve current practice.

A COE is characterised by collaboration, research, knowledge and skills transfer and leading practice (nationally and internationally). This may include facilitating, demonstrating and promoting the adoption of:

- New technology or technology tools
- New solutions techniques or practices
- New research and practice applications

Knowledge transfer is an essential element of a COE. Advancing the new practice therefore requires education and skills transfer to deliver the; broad change, transformation or improvement.

4.2 Australian Initiatives and Examples

4.2.1 ARC-funded Centres of Excellence

The Australian Research Council (ARC), funder of many of Australia's Centres of Excellence, publishes details of Centres of Excellence that they have funded and the period of the funding. This provides insight into the broad range and purposes of Centres of Excellence in Australia.

[40] https://www.perficient.com/insights/guides/2017/five-guiding-principles-of-a-successful-center-of-excellence

[41] https://tda.edu.au/newsletters/tafe-centres-of-excellence-a-good-mechanism-to-foster-partnerships-comment-by-ceo-jenny-dodd/

ARC is a government agency that supports research and innovation in Australia. The ARC Centres of Excellence are prestigious hubs of expertise that link researchers from different institutions within Australia and internationally to collaborate on challenging and significant research problems. ARC Centres of Excellence are selected through a competitive grant process and receive funding of up to $5 million per year for up to seven years. See current funded COEs in Table 36.

Table 36: ARC-funded Centres of Excellence

Centres of Excellence with funding between 2017-2024 and 2020-2027	
Centre of Excellence in Exciton Science	Centre of Excellence for Australian Biodiversity and Heritage
Centre of Excellence in Population Ageing Research	Centre of Excellence for Climate Extremes
Centre of Excellence for Dark Matter Particle Physics	Centre of Excellence for Engineered Quantum Systems
Centre of Excellence for the Digital Child	Centre of Excellence for Automated Decision-Making & Society
Centre of Excellence for Gravitational Wave Discovery	Centre of Excellence in Future Low-Energy Electronics Technologies
Centre of Excellence for Plant Success in Nature & Agriculture	Centre of Excellence for Innovations in Peptide and Protein Science
Centre of Excellence in Synthetic Biology	Centre of Excellence for Enabling Eco-Efficient Beneficiation of Minerals
Centre of Excellence for Transformative Meta-Optical Systems	Centre of Excellence for Quantum Computation and Communication Technology
Centre of Excellence for All Sky Astrophysics in 3 Dimensions	Centre of Excellence for Children and Families over the Life Course

Source: arc.gov.au

The objectives of the ARC Centres of Excellence are to:

- undertake highly innovative and potentially transformational research that aims to achieve international standing in the fields of research envisaged and leads to a significant advancement of capabilities and knowledge
- link existing Australian research strengths and build critical mass with new capacity for interdisciplinary, collaborative approaches to address the most challenging and significant research problems
- develop relationships and build new networks with major national and international centres and research programs to help strengthen research, achieve global competitiveness and gain recognition for Australian research
- build Australia's human capacity in a range of research areas by attracting and retaining, from within Australia and abroad, researchers of high international standing as well as the most promising research students
- provide high-quality postgraduate and postdoctoral training environments for the next generation of researchers
- offer Australian researchers opportunities to work on large-scale problems over longer periods of time
- establish Centres that have an impact on the wider community through interaction with, and beneficial outcomes for, higher education institutions, governments, industry and the private and non-profit sectors.

4.2.2 TAFE linked Centres of Excellence

Jenny Dodd, CEO of TAFE Directors Australia stated in June 2023:

"As part of the National Skills Agreement negotiations, Minister O'Connor has signalled the establishment of TAFE Centres of Excellence. TAFE Centres of Excellence will focus on meeting key economic challenges in national priority areas of sovereign capability and Australia's move to net zero emissions. These Centres of Excellence will be partnerships between TAFE, universities, and government (that is, State and Territory governments as well as the Commonwealth). These sorts of models have been effective overseas'. She goes on to state; 'Therefore, TAFE Centres of Excellence can foster linkages between higher and vocational education

for students and industry partners. However, it continues to be essential for TAFE to have more agility if it is to lead solutions for industry with universities. And, therefore, the ability to self-accredit courses, like our university partners, is essential."[42]

Case Study: Australian Centre for Energy and Process Training

The Australian Centre for Energy and Process Training (ACEPT) is located at SM TAFE's Munster Campus. It is a world-class, specialist training facility aligned with training requirements of the oil and gas, processing and resources industries. The training focused Centre of Excellence model includes a purpose-built facility that enables students the opportunity to have hands-on experience in a real-life industry setting. Elements include:

- An oil and gas facility and process plant
- A process plant control room with debriefing, communications and simulation rooms
- An office space for industry partners, allowing direct participation with students
- General and computer-based learning areas
- Navy specialist training room
- CAD computer laboratories
- IOT home automation
- Material testing laboratory[43]

Key to the success of the Centre of Excellence, as identified by SM TAFE, is a governance framework that includes their industry partners. They state "We work closely with our industry partners to ensure our training meets current industry practice and workplace demands. Some of our industry partners include Shell, Chevron, Woodside, Quadrant Energy, BHP, and ConocoPhillips."

4.2.3 Centre of Excellence for Clinical Innovation and Behaviour Support

This Centre of Excellence (CEBS) is based at the Ipswich campus of the University of Queensland and brings together international and local talent to lead the development of best practice models of care that support people with an intellectual or cognitive disability and challenging behaviours.

At its core CEBS was established to define 'best practice' by building on and bringing together the expertise and evidence based research knowledge of leading Australian and international academics and principal clinicians.[44] CIBS appointees had a remit to "work closely and cooperatively with service providers across the State to ensure these quality practices are implemented on the ground where they are needed most."[45]

The outputs of the centre could be summarised as research, model development and translation into practice transferred through training/education.

A review of key outputs, demonstrates that CEBS have also played a significant role in policy development and acted as effective educators and advocates to Government.

4.3 A Centre of Excellence for Aged Care Training in Mandurah

4.3.1 Context

Background

Deloitte Access Economics was engaged by the COM to undertake an economic analysis to inform the identification of opportunities to pursue, challenges to address, and actions to undertake. Deloitte's Mandurah's Economic Opportunities report (2022) identified

[42] https://tda.edu.au/newsletters/tafe-centres-of-excellence-a-good-mechanism-to-foster-partnerships-comment-by-ceo-jenny-dodd/

[43] https://www.southmetrotafe.wa.edu.au/specialist-training-facilities/acept

[44] https://www.uq.edu.au/news/article/2008/11/australias-first-disability-centre-of-excellence-opens-uq-ipswich

[45] https://www.uq.edu.au/news/article/2008/11/australias-first-disability-centre-of-excellence-opens-uq-ipswich

eight high-level opportunities for Mandurah's future economic development in the medium to long term that included building the capacity of the aged care workforce.

Vision

COM will provide a leading role in expanding, innovative, future proofed training to address significant forecast shortages of skilled labour in the aged care sector, initially within the region, leading to supporting the sector statewide. Although this initiative has the focus of aged care, it is noted that there may be potential inclusion / cross-over of staff and nurse training in the NDIS area.

Investigation

The proponents of this initiative (the Peel Development Commission and City of Mandurah) have imagined that the vision could be achieved through the establishment of a State-wide Aged Care Training Centre of Excellence based in Mandurah.

The investigations of this initiative has been conceived in two parts i) the need to establish a Statewide Aged Care Training Centre of Excellence (COE) in Mandurah and if a need is established the ii) feasibility of the COE.

4.3.2 Initial Model

Evidence and expertise

This section outlines an initial description of a Statewide Aged Care Training COEin Mandurah. This initial model proposes the elements that would be used to support a productive co-design process if the project proceeds to the feasibility stage. The initial model draws upon:

- The authors' experience and expertise
- The findings of this study including extensive commentary provided by consultees relating to their perspectives of a COE and the issues and problems it could address
- The COE case examples and definitions reported in this section

The Mandurah model

We propose that the Mandurah COE model be co-designed with key stakeholders using the following outcomes and model elements as guidance. These outcomes and model elements have been articulated giving consideration to the scale of need and the issues to be addressed to ensure that aged care has a workforce of the quality, qualifications and quantum required by 2031. The COE will create an opportunity to use the Stanford University-developed concept for large-scale social change that requires broad cross-sector coordination; Collective Impact.[46]

Key outcomes sought:

- Improve the quality of graduating students so their training and qualifications are matched to the requirements of the workplace
- Increase the number of Aboriginal aged care workers (RNs, allied health, ENs, support workers, personal care workers)
- Deliver training for new practices and the adoption of new technology focused on efficiency and effectiveness
- Create and promote a new vision for a rewarding and attractive career in aged care (includes engagement with secondary school students)
- Create opportunities for real world experiences (workplace and simulated workplace) that are central to training and assessments

[46] Kania J & Kramer M (2011). Collective Impact. Stanford Social Innovation Review, 9(1)

- Affect policy and funding priorities to ensure that workforce planning and initiatives to recruit the quantum of suitable candidates can be achieved (including skilled migration initiatives, the development of cross-cultural workers, the development of an Aboriginal workforce)
- Affect policy and funding to ensure that the quantum of training facilities, modes of training and the quantum and quality of trainers can be delivered to meet the demand for training
- Build cross-sector participation and innovation to aid in the transformational reforms of aged care that includes: architects, technology, manufacturers, developers, business strategists
- Promote innovation and leading practice that is adopted statewide

To achieve these outcomes the key elements of the model are:

- Bringing together: experts/researchers in aged care (includes subject matter expertise in areas such as dementia, and behaviour management), education (university and VET), providers (community and residential aged care), funders (includes government), government (as policymakers), economists, technology, people with lived experience, cross-sector participants
- Governance/Leadership to create the scope of the model, manage the business of the COE and maintain the fidelity of the model and the related roles of the COE to achieve the outcomes sought
- Co-design with Aboriginal people how the COE will build an Aboriginal aged care workforce
- Leadership that brings all the stakeholders together including; 'beneficiaries and customers'
- Development and implementation of a measurement and evaluation framework connected to continuous quality improvement
- Ownership or buy-in to the COE from critical partners – potential through the creation of a cooperative model of ownership
- Creates opportunities for partners to develop demonstration sites and examples of leading practice and innovation that could be scalable and replicable. This approach would promote the adoption of innovation through developing the next generation of managers, nurses and clinicians and would build a positive image of aged care. In addition, exposure to innovation would allow VET students to build skills and an outlook that would support the wide-scale adoption of innovations suitable to scale up. The range of innovation options that we consider to be appropriate for the COE include:
    - aged care cluster model for small rural communities[47]
    - Living Labs (Appendix 2)
    - The Buurtzorg model (Appendix 3)
    - innovation in work placements and on-the-job training eg Coolibah Care & Skill Strategies
    - co-location and integration of services such as:
        - multidisciplinary GP and health clinic
        - a therapy centre
        - high rise development integrating healthy ageing, community aged care, onsite 24 support and related ownership and business models
        - child care

[47] Faircloth D & Sullivan B (2016). Ageing in the Bush, Western Australian Government; Department of Regional Development (2015 – 2016) and a demographic update (2021/22).

- new modes of low cost housing built to platinum level disability access (such as the Heathcote model[48])
- the development and application of new technologies particularly those that support better monitoring, diagnosis, risk management and response (community and residential care)
- the development and/or improvement of assistive technologies
- a dementia village
- how the built environment can shape better care, reduce behaviours associated with poor mental health and dementia and lower the cost of care (this could be a virtual model and physical examples over time)

- Use the breadth and creativeness of the innovations at the COE and in real world demonstration site a strong point of difference to attract student nurses, allied health students, and technology and managements students from across WA and Australia to participate in the training programs
- Has a physical location in Mandurah that houses: management, the lab, training facilities, technology such as a virtual design, demonstration home/room, simulated workplace, hosting spaces
- Facilitates the development or supply of sufficient student housing

4.4 Improving Outcomes

This section responds to the research question: Could the proposed Statewide Aged Care Training Centre of Excellence deliver improved outcomes (supply and quality of aged care workforce)? Increase the number of completions.

4.4.1 Summary of Needs

This Needs Analysis demonstrates that the population of older people will drive high demand for aged care. To deliver aged care services, there will need to be a very substantial increase in the aged care workforce (RNs, ENs, allied health, personal care workers and support workers). This growth will require significant additional training capacity and the quality and effectiveness of the training.

Currently, there are workforce shortages and inconsistent approaches and requirements for qualifications for the support workforce. In addition, there are challenges relating to the retention and attraction of RNs to aged care. Consultees consistently identified that there was a need to change the image of aged care, improve RN training to provide coursework exposure that relates to aged care and improve student placements in aged care. Generally it is considered that if these significant structural and recruitment issues are not overcome, this will result in continued and exacerbated workforce shortages. Skilled migration remains as a potential solution however it is also considered problematic due to language and cultural differences, skilled migration policies (particularly relating to the support worker workforce) and lack of affordable housing.

The workforce shortages are currently driving low occupancy rates in residential aged care. The lack of capacity in aged care facilities is adding pressure to hospitals. The Peel Health Campus confirms that a lack of suitable aged care places is resulting in the hospital housing older people who should be cared for in aged care. In NSW from Dec 2021 to Jun 2022 the number of regional patients awaiting discharge to an aged-care facility nearly tripled.

4.4.2 Improving Outcomes

The quantum of need and the intersecting factors leading to workforce shortages require a new approach that a COE (as described) could potentially address. The rationale is that a COE would address the following:

[48] https://heathcotedementia.org/

- Cross-sector commitment and coordinated responses: the Commonwealth and State Governments recognise the problem and favour cross-sector responses as described increasing the opportunity to receive dedicated funding for COEs
- There is no other Centre of Excellence focused on solving the need defined in this study
- There is strong support within the catchments and more broadly for the proposed COE from cross-sector players

FMA concludes that the proposed Statewide Aged Care Training Centre of Excellence would deliver improved outcomes (supply and quality of aged care workforce), and also increase the number of course completions.

The COE (as described) will benefit the catchments, WA and potentially Australia.

The study also responds to the question; 'Does the proposed Statewide Aged Care Training Centre of Excellence present an opportunity to improve economic activity in the Peel region (City of Mandurah)?'

The economic impact can be measured in

- Growth of the aged care workforce in the catchments will be very substantial – the feasibility study will define the impact
- Direct employment in the education sector will have positive economic impacts
- While studying, students will contribute to the local economy
- Older people will be retained and attracted to the catchments if the quality and volume of the local aged workforce is increased
- The positive impact of the COE in addressing structural issues is likely to support an increase in the number of residential aged care places developed with very substantial capital investment in the catchment $1.1B in the catchments by 2031

Therefore FMA concludes that the proposed Statewide Aged Care Training Centre of Excellence presents an opportunity to improve economic activity in the Peel region and particularly the City of Mandurah.

4.5 Alignment to State and Regional Priorities

The Needs Analysis findings and enquiries align with significant social and economic strategic planning processes in the Peel Region including the People of Peel Report and the Peel Regional Investment Blueprint. In addition there is alignment with State and Commonwealth priorities.

The Peel Blueprint

The Aged Care Training Centre of Excellence (COE) aligns with the Peel Regional Blueprint and in particular priority areas 'Capable People' and 'Strong and Resilient Communities'. The COE will:

- Facilitate the planning for, attraction, training and professional development a highly skilled workforce
- Support capacity and capability building vital to being able to flexibly respond to workforce requirements of the future across all of the key workforce classifications required to deliver safe and high quality aged care
- Aid in the creation of support services and infrastructure that will ensure that older people can age in the community of their choice
- Support positive ageing where older people can contribute and be valued in their community their families

The People of Peel

The Aged Care Training Centre of Excellence (COE) is aligned to the goals of The People of Peel projects aspirations including:

- Supporting a deeper understanding of the Peel region's human capital

- Promoting employment and creating the environments where significant aged care infrastructure development can occur and thereby impacting regional economic development.

- Supporting safe and high quality aged care building and retaining the social capital of the older populations

- Addresses the workforce shortages that threaten the delivery of the quantum and quality of aged services required in Peel and the surrounding regions

State Priorities

In section 2.8.6 the 'Snapshot of Workforce Development Initiatives and Incentives' the focus is on the nature of the incentive and its benefit. A number of these incentives are managed through joint agreements between the State and the Commonwealth at Department level such as the 'Free in 23'; an initiative that supports access to quality VET training for Aged Care Support Workers or candidates.

For example the WA State Training Plan 2023 to 2024 states 'Western Australia has entered into a 12 month Interim Funding Agreement with the Commonwealth Government, which launched the FREE IN '23 – 18,800 fee free TAFE and VET places from 1 January 2023. In Consolations undertaken in this study with the Department of Training and Workforce Development are indicating that this initiative is likely to be extended.

Other elements of the Aged Care Workforce development are managed through the work of the WA Government in COAG.

However, the given the significant growth in the ageing population and resultant demand for aged care services and the workforce required to deliver the services, the State Priorities and initiatives appear to be underdeveloped and or understated. It also should be understood that Aged Care is a Commonwealth Government responsibility.

5 Conclusion

This Needs Analysis demonstrates a very strong need and a high level of interest in a Centre of Excellence in Aged Care Training in Mandurah. The study finds a Centre of Excellence in Aged Care Training could increase workforce and workforce quality through the following solutions:

- Retaining the existing workforce through improving leadership and management skills
- Improving retention of the existing workforce (RNs and Support Workers) through preparing RNs not only for their clinical roles but also for the leadership and management roles required in aged care by including leadership and management in the core course work or Post Graduate studies for RNs
- Increasing the nursing workforce through; more accessible EN to RN transition pathways; designing better tertiary courses (Bachelor of Nursing, Bachelor of Science (Nursing)) to aid RNs to make choices to enter the aged care workforce; improved work placement practices
- Increasing RNs in residential aged care will reduce long stay patients in hospitals leading to higher occupancy rates in residential aged care and the related improvement in financial performance of Providers. Increasing supply of appropriately skilled RNs in residential aged care will also enable Providers to more confidently develop the new facilities required across WA with a resultant investment of up to $3.1B
- Increasing RNs in residential aged care will also reduce the very significant cost burden to the WA Government related to long stay patients who are unable to be discharged to residential aged care
- Lifting the quality and processes related to the VET sector, building on best practice examples particularly increasing the capacity for student placements, limiting digital only models, supporting the development of VET trainers with real industry experience, consistency in relation to the course material, including the industry requirements into the training and assessment standards
- Increasing completion rates in VET courses through improved pre-qualification and improved student support during training
- Targeted skilled migration – connected to VET training initiatives and integrated/aligned with providers' needs
- Developing place-based initiatives (community and providers) that the COE could facilitate
- Planning, evaluation and research that is integrated with recruitment, training and retention
- Improved pre course screening processes to aid completion rates
- Incorporating technology and research into the CEO to promote the adoption of leading practice
- Incorporating exemplars of leading and innovative practice into the COE as a competitive advantage to attract high quality candidates for training and to lift the desirability/quality of graduates to the Industry
- To create simulated (actual and virtual) environments for assessing competencies particular for VET students working in Home Care environments
- Creating a living lab that brings together lived experience, trainees/students, industry, industry partners, research

FMA considers that the proposed State-wide Aged Care Training Centre of Excellence presents an opportunity to improve economic activity in the City of Mandurah and broader Peel region based on three major themes:

- The significant benefits in direct aged care employment in the primary catchment
- The economic activity associated with training and professional development across the catchments
- Aged care providers targeting the catchments as viable locations for service development and expansion (estimated value $1.1B by 2031)

What a COE is, who should partner the COE initiators, the business case, the economic benefit and infrastructure needs are yet to be fully developed. The Feasibility Study will support more granular insights into the COE scope, throughputs, outputs, outcomes and impacts.

While there are potential inclusions and cross-over areas of workforce development and drivers of demand, FMA conclude that the sheer size of the need based on aged care is sufficient to justify undertaking a Feasibility Study. The cross-over may be more relevant when the vision of the COE is fully formed. The Feasibility Study, business plan and related risk assessment will discuss inclusions, cross-over and the potential risk for the three major care workforce sectors (health, NDIS/disability and aged care) to cannibalise each other, to the detriment of all.

6 Appendices

Appendix 1: Targeted Literature Summary

Index

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Document	Relevant Key Points
Aged Care Workforce Strategy Taskforce (2018). At a Glance: The 14 strategic actions of Australia's Aged Care Workforce Strategy.	Extract: A Matter of Care – Australia's Aged Care workforce strategy is made up of fourteen strategic actions. These give the industry tools to prepare the workforce for the future and improve the quality of aged care for all. 1. Creation of a social change campaign to reframe caring and promote the workforce 2. Voluntary industry code of practice 3. Reframing the qualification and skills framework – addressing current and future competencies and skills requirements 4. Defining new career pathways including accreditation 5. Developing cultures of feedback and continuous improvement 6. Establishing a new standard approach to workforce planning and skills mix modelling 7. Implementing new attraction and retention strategies for the workforce 8. Developing a revised workforce relations framework to better reflect the changing nature of work 9. Strengthening the interface between aged care and primary/acute care 10. Improved training and recruitment practices for the Australian Government aged care workforce 11. Establishing a remote accord 12. Establishing an Aged Care Centre for Growth and Translational Research 13. Current and future funding considerations, including staff remuneration 14. Transitioning the existing workforce to new standards
Australian Skills Quality Authority (2013). Training for Aged and Community Care in Australia. Commonwealth of Australia	"Key messages: • The Certificate III in Aged Care remains the most common qualification for new entrants to the aged and community care industry • Most registered training organisations have difficulty complying with assessment requirements • Following time to rectify areas where they were not compliant, most registered training organisations became compliant with the national standards • Training programs are largely too short and with insufficient time in a workplace for sufficient skills development • Changes to the national standards for training organisations are required" p iii
Broad JB, Ashton T, Gott	"Long-term residential aged care (RAC) is used at any one time by about 4-6% of those aged 65 years or over in many

Document	Relevant Key Points
M, McLeod H, Davis PB & Connolly MJ (2015). Likelihood of Residential Aged Care Use in Later Life: A simple approach to estimation with international comparison. ANZJPH 39[4], pp 374-79	developed countries, including NZ.[49] [50] [51] This figure – usually derived from research adopting cross-sectional methods such as censuses and surveys – sometimes leads to the erroneous assumption that only few people use RAC during their lifetimes.[52] Inappropriate use of cross-sectional figures for estimating the likelihood of use of RAC – which Kastenbaum and Candy referred to as "the four per cent fallacy"[53] [54] – may suggest that the sector is small and affects few people. To avoid such misunderstandings, and for policy and planning purposes, estimates are needed of the likelihood people aged 65 and over will use residential care at any time before they die, hereafter termed 'lifetime use'." p 374 "Overall, 54% of all deaths of those aged 65+ [in Australia] occurred in acute hospital, and 32% in RAC[55]. Of all in-hospital deaths of people aged 65 years and over, 13% occurred while 'on leave' from RAC, i.e. during an admission to acute hospital directly from their long-term care facility (based on dates of leave discharge and death). Thus, a further 13% of 54% must be added. The estimated lifetime use of LTC in Australia after age 65 years is therefore 32% (from RAC) plus 7% (in-hospital deaths from RAC), making a total of 39%. Again, these estimates do not include those returning to the community and dying there. In comparison, previous published reports for lifetime RAC use in Australia were for 34%[56] and 38% when short-stay residents were excluded, and 53% when included.[57]" p 376 "Late-life care has already evolved. In several countries including NZ, RAC has moved from a predominantly housing and social welfare model to a health and care model. Although RAC beds outnumber acute hospital beds by more than three times and it is well recognised that population ageing will bring major challenges,[58] the RAC sector remains largely invisible, with residents not included in many population surveys and reports at a population level.[59] Beyond the continued surveillance of mortality and other dynamic indicators there is a need to monitor RAC use, to understand better the pressures that lead to RAC entry and the determinants of length of stay. To avert large increases in demand for RAC, alternatives are needed. Public debate and research is justified – for example, to determine if entry to RAC may be avoided or delayed for people with high dependency, without reducing quality of life. Such initiatives may improve management of chronic diseases, reduce falls, facilitate transitions back into the community postdischarge, provide day-care for people with dementia or other needs, and/or enable shared or sheltered accommodation. Research to investigate risk factors for entry to RAC in a variety of populations may contribute to a better understanding of the reasons for high levels of RAC, and facilitate reassessment of evidence-based alternatives. Second, differences in lifetime risk between countries should caution readers of possible lack of generalisability of research studies. There are fundamental differences in RAC utilisation, whether in the care provided or in the mix of residents. Other reports suggest this is so.[60] [61] Findings from intervention studies, whether randomised or not, and from studies assessing risk factors for RAC care or for acute hospitalisation from RAC may not be generalisable to other health systems. Third, the findings have implications for personal financial and care planning.[62] Public recognition of personal future risk may raise awareness of the issues around managing housing and investment options, and may clarify expectations for financial advisors, family trusts, attorneys and others. Further, acknowledgement of the high risk of RAC may facilitate or ease discussions with families about preferences for late-life care. Finally, for immediate needs, knowing that such substantial proportions of older people use RAC for late-life care indicates a need for a palliative care approach within RAC. For example, in NZ, RAC appears to serve as a de facto hospice following an acute hospital stay.[63] RAC staff are reportedly less willing to undertake training in palliative

[49] Australian Institute of Health and Welfare (2009). Deaths, Summary—1998 to 2008 Australian Bureau of Statistics. Canberra (AUST): AIHW.
[50] Broad JB, Ashton T, Lumley T, Connolly MJ (2013). Reports of the proportion of older people living in long-term care: A cautionary tale from New Zealand. *Aust N Z J Public Health.* 2013;37(3):264-71.
[51] Organisation for Economic Co-operation and Development (2011). *Health at a Glance 2011: OECD Indicators*. Paris (FRA): OECD Publishing.
[52] Holm M (2011, October 15). Our chances of ending up in a rest home. *N Z Herald*.
[53] Kastenbaum R & Candy SE (1973). The 4 per cent fallacy: A methodological and empirical critique of extended care facility population statistics. *Int J Aging Hum Dev.* 1973;4(1):15-21.
[54] Kastenbaum R (1983). The 4% fallacy: R.I.P. *Int J Aging Hum Dev.* 1983;17(1):71-4.
[55] Broad JB, Gott M, Kim H, Boyd M, Chen H & Connolly MJ (2013). Where do people die? An international comparison of the percentage of deaths occurring in hospital and residential aged care settings in 45 populations, using
published and available statistics. *Int J Public Health.* 2013:257-67.
[56] Liu Z (2000). The probability of nursing home use over a lifetime in Australia. *Int J Soc Welf.* 2000;9(3):169-80.
[57] Rowland F, Liu Z & Braun P (2002). The probability of using an aged care home over a lifetime (1999-00). *Australas J Ageing.* 2002;21(3):117-22.
[58] Organisation for Economic Co-operation and Development (2011). *Health at a Glance 2011: OECD Indicators*. Paris (FRA): OECD Publishing.
[59] Moore DC & Hanratty B (2013). Out of sight, out of mind? A review of data available on the health of care home residents in longitudinal and nationally representative cross-sectional studies in the UK and Ireland. *Age Ageing.* 2013;42(6):798-803.
[60] Fries BE, Schroll M, Hawes C, Gilgen R, Jonsson PV & Park P (1997). Approaching cross-national comparisons of nursing home residents. *Age Ageing.* 1997;26:13-18.
[61] Boyd M, Bowman C, Broad JB & Connolly MJ (2011). International comparison of long term care resident dependency across four countries (1998-2009): A descriptive study. *Australas J Ageing.* 2011;31(4):233-40.
[62] Holm M (2011, October 15). Our chances of ending up in a rest home. *N Z Herald*.
[63] Connolly MJ, Broad JB, Boyd M, Kerse N & Gott M (2013). Residential care for older people - the de facto hospice for New Zealand's older people. *Australas J Ageing.* 2013;33(2):114-20.

Document	Relevant Key Points
	care when scoring more highly on a measure of burnout.[64] Yet, given that almost half of older people die having lived in RAC, a palliative care approach is relevant and appropriate. This study offers a method of estimation of lifetime probability of RAC use in countries where large prospective cohorts are not assembled but where place of death information is available from death certificates. In this method, ratio estimators are derived from several smaller studies and applied to known information about place of death in the population. As such, it is simpler and cheaper than methods requiring cohorts of long duration and complex statistical models. The method could be viewed as a first step in developing more complex or refined methods if desired. Because it is based on recent data about place of death, it is less subject to time-related societal changes, unlike those that occur over decades-long cohort studies and so may be more accurate. Because the method uses the mean of smaller contributing studies (here four separate studies) to adjust place of death information for RAC residents who die in acute hospital, the ratio estimators may be more reliable than using any single source of data. It is likely that in many countries, such smaller datasets will be available to inform the ratio adjustment." p 377-8
Cass B, Hill T & Thomas C (2012). Care to Work? Expanding choice and access to workforce participation for mature aged women carers. HC Coombs Policy Forum, Australian National University	"Access to flexible work arrangements, including the right to request flexible hours and access to paid and unpaid leave[65] [66] [67] [68] and supportive workplace cultures[69] are key elements that might assist all carers to balance care and paid work responsibilities and maintain attachment to the labour market. In addition, evidence suggests that carers who access formal services are more likely to remain in employment.[70] However, employed carers' access to income support is limited due to the strict eligibility criteria,[71] a factor that may constrain options for all individuals facing choices around work and care." p 7 "A key factor cited by employers as a barrier to employing older workers is the 'perceived lack of appropriate skills'.[72] Lack of education or relevant skills may thus be a factor affecting choices about types of employment, and possibilities of combining paid employment and unpaid care in mature age for particular groups. Policies supporting opportunities for retraining and updating skills would foster the employment of all mature aged carers. Existing education qualifications may affect opportunities to remain in employment. Employment rates for older people (aged 55 years and over) with tertiary qualifications are 76 per cent compared to 53 per cent for older people without a post school qualification.[73] Another key factor affecting the employment opportunities of mature aged people and mature aged carers is their health, with ill health being a key reason for the retirement of men and women.[74] Policies aimed at enhancing the physical and mental wellbeing of older people would assist in supporting employment retention and re-entry.[75]" p 8 "Specific strategies to assist mature aged carers to re-enter paid employment would encompass providing access to relevant education and retraining programs and courses that assist them to recognise and enhance their existing skills. Drawing on lessons from best practice internationally, a comprehensive suite of supports for mature aged women carers would encompass a range of policies in the following domains: • Recognition of care through conferral of rights as a carer • Legal – strengthen anti-discrimination legislation for those with caring responsibilities • Establish a statutory right to a carer's assessment of their needs, with a particular focus on whether the carer seeks to remain in employment or re-enter employment • Public education campaigns to recognise the social and economic contributions of carers, such as the Care Aware, National Carer Awareness Initiative launched in 2012 (Australian Government, 2012m)

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[66] Pavalko E & Henderson K (2006). 'Combining Care Work and Paid Work', *Research on Ageing*, 28(3), 359-374.
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[69] Yeandle S, Benner C, Buckner L, Shipton L & Suokas A (2006). *Who Cares Wins: The Social and Business Benefits of Supporting Working Carers*, Centre for Social Inclusion, Sheffield Hallam University, Sheffield.
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[73] Australian Bureau of Statistics (ABS) (2010). 'Older people and the labour market' *Australian Social Trends*, Catalogue no. 4102.0, September 2010, ABS, Canberra, 5
[74] Warren D (2008). 'Retirement expectations and labour force transitions: the experience of the baby boomer generation', Melbourne Institute of Applied Economic and Social Research working paper series no.24/08 in McDonald, P. (2011), 'Employment at older ages in Australia: determinants and trends' in Griffin, T. and Beddie, F. (eds), *Older workers: research readings*, National Centre for Vocational Education Research, Australian Government, Department of Education, Employment and Workplace Relations, Canberra, p 34
[75] Earle A & Heymann J (2011). 'Protecting the health of employees caring for family members with special health care needs', *Social Science and Medicine*, 73, 68-78.

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	>>Workplace mechanisms • Flexible work hours, adjustable start and finish times, options to vary the location of work and work from home • Enhanced paid and unpaid leave options and opportunities for career breaks • Workplace culture • Recognition of, and support for, flexible work as the norm • Fostering team-work and multi-skilling within workplaces • Anti-discrimination training for employers and co-workers • Income support, pensions and superannuation benefits • Credits for employees with caring responsibilities in the superannuation system • Retirement savings and income contributions during periods of reduced employment or withdrawal from employment for caregiving • Support services • Community care, disability care and aged care services to provide options to facilitate carers participating in employment, ie to move beyond support of carers in their caring role to facilitation of employment/care combinations • Training for carers for their caring role, and for health and community care service providers to recognise carers as partners in care • Recognition and rights for carers in the health system • Training, re-training and education • Tailored support and employment services for mature aged women to remain connected with and re-enter employment during and after time spent caring" p 30-31
Deloitte Access Economics (2020). The Value of Informal Care in 2020.	"Most hours of informal care are provided by primary carers. These individuals are estimated to spend an average of 35.2 hours per week providing care compared with an assumed 5 hours of weekly care for non-primary carers. For primary carers, 28% spend more than 60 hours per week, while 25% spend between 1 and 9 hours per week. These caring requirements place a significant burden of carers, forcing many to either reduce their hours worked or withdraw from the labour force altogether. The estimated age-standardised fulltime employment rate for primary carers is 23.7% in 2020, in comparison to the population average of 43.1%. In contrast, 23.6% of primary carers are employed part-time (age standardised), compared with 21.9% for the general population." p iii "The replacement cost method measures the cost of 'buying' an equivalent amount of care from the formal sector if the informal care were not supplied. Primary informal carers were estimated to provide an average of 35.2 hours of care per week in 2020, while non-primary carers are assumed to spend 5 hours per week. Based on the approximate 906,000 primary carers and 1.9 million non-primary carers, it is estimated that a total of nearly 2.2 billion hours of care were provided in 2020. This is comprised of almost 1.7 billion hours from primary carers and 491 million from non-primary carers. Our analysis found that the average hourly cost of employing a formal carer to replace an informal carer, with all relevant loadings, was estimated to be $36.12 in 2020. Based on this average hourly replacement cost, it was estimated that the total cost to replace all informal care in 2020 is $77.9 billion." Iii "The opportunity cost method measures the formal sector productivity losses associated with caring, as time devoted to caring responsibilities is time which cannot be spent in the paid workforce. Our analysis found that the age-standardised rate of employment among primary carers is 47.3%, compared to the average Australian rate of 65%. The rate for non-primary carers is also slightly lower than the average, at 62.1%. This means there are substantial differences in the employment outcomes for carers relative to non-caring Australians. In total, an estimated 160,900 primary carers and 53,000 non-primary carers are assumed to not be in paid employment due to their caring role (as shown in Table i). This is equivalent to approximately 1.51% of Australia's labour force (15 years and older) in 2020. In 2020, the estimated earnings foregone for primary and non-primary carers was $11.4 billion and $3.8 billion respectively. Combined, the opportunity cost for all carers is $15.2 billion. This is equivalent to 0.8% of GDP and 10.6% of the value of formal health care." p iv "The future demand for informal care has been modelled separately for those aged 0-64 and those aged 65+.2 In both cohorts, a need for care was assessed using the number of persons who have a profound or severe disability. For the younger cohort, care needs were assessed as being met through the formal sector if people received formal care daily, or if they lived in residential care accommodation.3 For the older cohort, care needs were assessed as being met if the person lived in residential care accommodation. Age- and gender-specific disability rates, living arrangements and care arrangements from the SDAC were applied to Australian Series B population projections

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	published by the ABS to determine the number of people requiring care in the coming decade. The demand for informal carers will grow from around 1.25 million in 2020 to 1.54 million in 2030, representing a 23% total increase. In contrast, the supply of informal carers will rise from 674,000 to 780,000, a total growth of 16%. This will see the carer ratio fall by 3.2 percentage points from 53.8% in 2020 to 50.6% in 2030." p iv "Propensity to care is likely to be influenced by many factors in the future, such as: • Current demographic trends in disproportionate population ageing • Changes to Australia's societal structure such as smaller family sizes, higher divorce rates, rising childlessness and the increase of single-person households, which may reduce the pool of informal carers • Rising rates of female participation in the labour force as well as older workers, resulting in lower propensity to care • The increased availability of government-supported care in the home environment • Changes in intergenerational attitudes and perceptions of caring The widening carer gap has significant policy implications for Australia's future with the need to investigate possible solutions to help boost the propensity to supply care and to soften the demand for informal care where possible. There is a strong case to consider the following suggestions as part of a concerted policy effort to reduce the carer deficit: • Greater flexibility in working arrangements to accommodate workers' caring responsibilities and employment preferences, such as improved carer leave • Improvements in access to, and awareness of, carer support services such as respite care to encourage service utilisation and alleviate the impact of caring • Further investigation of carer perceptions of the costs, and quality of formal care • Adapting the formal care sector to meet the needs of older Australians from diverse backgrounds to improve the flexibility of care options. This imperative was recently brought to broader public attention through the ongoing Royal Commission into Aged Care Quality and Safety. While focused on the aged care sector in Australia, many of the views and issues arising are also relevant to the broader care requirements of all Australians, including those living with a disability. Despite the complexity of the multitude of views presented to the Commission, what is becoming clear is that a fundamental overhaul of the design, objectives, regulation and funding of aged care in Australia is required. Carers are critical to the sustainability of the aged and disability care systems. They provide support and services that may otherwise be funded by the taxpayer, the estimated value of which is significant. Over the past 20 years, the role of carers has been recognised increasingly through various aged care and social policy reforms. As demonstrated in this report, informal carers provide a significant contribution to the health and wellbeing of Australians in need of support and assistance, the magnitude of which only underscores the impending policy challenges faced by Australia. Greater recognition and awareness of carer demographics and preferences will ensure that approaches to social policy are responsive to the needs of carers and care recipients alike, resulting in improvements in welfare for Australia in the future." p v-vi "Since the rollout of the NDIS, families and carers of participants in the scheme have experienced improved employment outcomes.10 For participants who had been in the scheme for at least one year as at 30 June 2018, employment among carers of participants aged 0 to 14 had increased 3.1%, and for those aged 15 to 24, employment had risen 3.3%. Recognising the lower threshold to returning to work or working more hours for non-primary carers, it is likely that these improved employment outcomes at least partially explain the reduction in the total number of informal carers. There has also been a gradual decrease in the propensity to provide care over the past 20 years, irrespective of age or gender. As detailed in the 2015 analysis, the primary reasons for this downward trend are demographic changes, social trends, changes in labour force participation among females and older Australians, and intergenerational attitude differences. Therefore, as Australia's population continues to age, yet more females and older Australians enter the workforce or delay retirement, there are likely to be more elderly people and people living with a disability moving into the formal care sector. This coincides with greater investment in the formal care sector through the NDIS and community aged care programs, in recent years." p 8-9 "The provision of informal care is dependent upon changes to societal structure. Estimating whether a person provides informal care to another relies on the social context; and in particular the family situation.[76] It is clear that family plays an important role in the provision of informal care, Chart 1.9 shows that 89.8% of informal carers are a

[76] van Groenou MIB & De Boer A. (2016). Providing informal care in a changing society. European Journal of Ageing, 13(3), 271-279.

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	family member of the recipient. In 2016 there were 2.3 million Australians living alone. It is estimated that by 2041 the number of people living alone will increase to 3.0-3.5 million.[77] This increase is largely due to the ageing population, with women aged over 65 representing a significant proportion of the population. This is partly explained by the difference in male and female life expectancy, with the average female born in 2015-17 now expected to live 4.1 years longer than a male born at the same time (84.6 years compared to 80.5 years).[78] Family structures are also shifting due to decreasing marriage rates and increasing divorce rates, which have been experienced over the past 20 years.[79] Combined with lower fertility rates, families are getting smaller. Smaller families are likely to reduce the overall number of informal carers in Australia and may place pressure on supply of informal and formal care where people living alone require care." p 33-34 "More females are participating in the labour force, placing pressure on the supply of informal care. Since 1978, the participation rate of females has increased from 43.3% (February 1978) to 61.4% (January 2020). This shift reflects the push for gender equality within the workforce, with the Australian government prioritising reducing the gender gap in workforce participation.[80] It is highly likely that the female participation rate will continue to improve. Though undoubtedly a positive initiative, this may reduce the number of carers in Australia. Chart 1.2 highlights that females aged 45-64 represent a significant proportion of all informal carers. Increased employment opportunities for females of working age will likely lead to more women choosing to work and thereby reduce the number of hours that they provide care. However, this relationship is influenced by other determinants of female labour force status. Barriers to women attaining employment include full-time care responsibilities or caring for a child with disability where there are no other people available to provide support.[81] This research suggests that women who have caring responsibilities are less likely to join employment, which may mean that improvements to female participation rates are explained by non-carer females joining the workforce – and thus not increase pressure on the supply of informal care. It should also be noted that growth in the female participation rate is also explained by increased participation in part-time employment. Part-time employment is likely to have a smaller impact on the number of carer hours provided as compared to full-time employment." p 34 "The participation rate of people aged 65 years and over is increasing. Since 2000, the participation rate increased from 5.7% (January 2000), to 9.9% (January 2010) and is currently 13.7% (January 2020).[82] People aged 65 years and over are now working later in their lives, in part driven by changes to pension eligibility and the age at which superannuation can be accessed.[83] This trend is likely to continue, with elderly people encouraged to work longer to bolster the size of the workforce in light of the ageing population.[84] Encouraging this cohort to work will reduce their available time, which may result in people choosing to reduce their caring hours or responsibilities. As more elderly people choose to stay in employment, the number of carers will fall. A fall in the number of elderly carers is expected to have a significant impact on the total supply of carer hours given the comparatively large number of hours of care that this age group typically provides." p 34 "While greater flexibility in working arrangements will support more people to provide informal care, it is also likely that this would benefit the existing informal carers who wish to enter or return to the workforce following a prior departure. In the 2012 SDAC, an estimated 22.9% of primary carers who were not in the labour force expressed a desire to work.[85] Given the growing rate of female participation in the labour force and the extended age of workforce participation, it is likely that increasing numbers of people will combine work and informal care in the future.[86] As such, flexible working arrangements will be key to allowing carers to remain in, or return to, employment while responding to the specific needs of their recipients of care." p 36
Dept of Education & Workplace Relations (2023, April 5). Supporting Micro-credentials in the	"Micro-credentials in vocational education and training (VET) offer more flexible ways of learning. They also deliver in-time training to meet emerging and urgent skills needs. Micro-credentials support people to move between jobs and industries and can be used as building blocks towards full qualifications." "In response to the COVID-19 pandemic, a range of new skill sets were developed and endorsed to respond to areas

[77] Australian Bureau of Statistics, Household and Family Projections, Australia, 2016 to 2041 (14 March 2019) Cat. No. 3236.0.

[78] AIHW, Deaths in Australia (2019) <https://www.aihw.gov.au/reports/life-expectancy-death/deaths/contents/life-expectancy>.

[79] Australian Bureau of Statistics, Australian Social Trends Indicators (18 March 2014) Cat. No. 4102.0.

[80] Australian Government, Women's workforce participation – an economic priority <https://womensworkforceparticipation.pmc.gov.au/womens-workforce-participation-economic-priority.html>.

[81] Gray M & Edwards B (2009). Determinants of the labour force status of female carers. Australian Journal of Labour Economics, 12(1), p 5.

[82] Australian Bureau of Statistics, Labour Force, Australia, Detailed -Electronic Delivery (27 February 2020) Series 6291.0.55.001.

[83] AMP, 'what is the retirement age in Australia' <https://www.amp.com.au/retirement/prepare-to-retire/retirement-age-australia>.

[84] Chomik R & Piggott J (2012). Mature-age labour force participation: Trends, barriers, incentives, and future potential < http://cepar.edu.au/sites/default/files/Mature-age_labour_force_participation.pdf>.

[85] Australian Bureau of Statistics (ABS) 2014, *Caring in the community, Australia, 2012: summary of findings*, cat. no. 4436.0, ABS, Canberra.

[86] Kenny, P., King, M., and Hall, J. 'The physical functioning and mental health of informal carers: evidence of care-giving impacts from an Australian population-based cohort' (2014), 22(6) *Health and Social Care in the Community* 646.

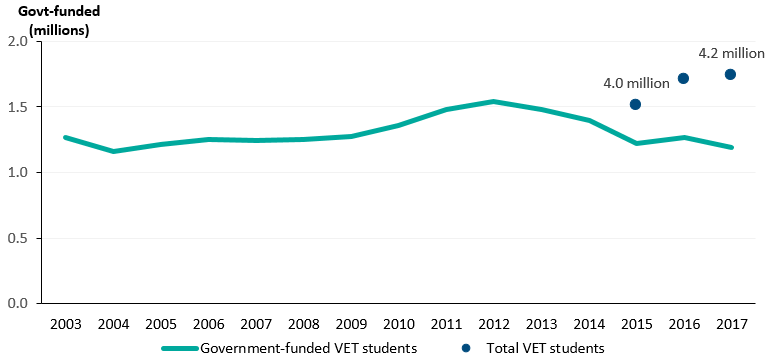
Document	Relevant Key Points
Training System, https://www.dewr.gov.au/skills-reform/supporting-microcredentials-training-system	of critical workforce, training and skills needs." "The importance of micro-credentials was also recognised under the JobTrainer Fund as part of the economic response to COVID-19. The Australian Government partnered with state and territory governments to establish the JobTrainer Fund. JobTrainer provides free or low-fee training places – including short courses – in areas of skills needs. Courses under JobTrainer can: • support entry into new roles • deliver training to meet specific technical or licensing requirements • enable young people to gain some initial skills or try training in an area of interest."

Dept of Education, Skills and Employment (2020). RTO Quality: Strengthening RTO Standards and Fostering Excellence. Skills Reform Issues Paper, Australian Government	"Recent reviews of, and feedback from, the vocational education and training (VET) sector have identified a need to improve the quality of training and assessment across the sector. While the quality of training delivery is impacted by many variables outside of the control of RTOs, such as the design of training products, RTOs have a critical role in ensuring the training and assessment delivered on the ground is of high quality and delivered in a way that best meets the needs of learners and employers." p 1
	
	"The rapid review of ASQA's governance and regulatory practices released in April 2020 identified that alongside improvements to ASQA, there was a need to improve the understanding of quality across the sector and to continue to build the capacity and capability of the sector to support delivery of high-quality training." p 2
	
	"While all RTOs must comply with the Standards, many RTOs deliver a service above and beyond the requirements of the Standards. What differentiates these providers that deliver above and beyond? What are the similarities across training provider types, and what are the experiences of the VET sector, of trainers and assessors, of learners, employers, and of RTOs themselves, in delivering training that far exceeds the minimum standard of quality? What are the elements of high-quality training provision? What differentiates high-quality engagement with employers, or high-quality assessment processes, or curriculum development, or what governance structures do RTOs need to enable them to best facilitate high-quality training? And what supports do RTOs need to better facilitate high-quality training provision?" p 2
	
	"Delivery of high-quality training goes beyond compliance with the requirements of the Standards. While the Standards establish a minimum level of quality that an RTO must meet to operate within the national training system, it is important to recognise there are many aspects of quality and many areas where it is possible to go above and beyond minimum requirements. The ASQA rapid review found there is little consensus within the sector in relation to how quality, outcomes and excellence should be identified and measured. As part of lifting quality and supporting providers to strive for excellence, it is critical to ensure there is a clear understanding within the sector as to what high quality is, how it can be identified, and how it can be measured." p 5
	
	"The quality of training delivery cannot be fully separated from the quality of training products. Previous feedback from the sector has often raised the issue of the design of training products as an area which can impact the flexibility and quality of training delivery. While the purpose of a national training system does require some standardisation of training outcomes, which aspects of the training products should be standardised, and where there is opportunity for greater flexibility, is being considered through a concurrent process looking at the reform of qualifications. This work will consider qualification design elements based on:
	• appropriately grouped occupation and skills clusters to deliver broader vocational outcomes for students (including stronger recognition of cross-sectoral and transferrable skills),
	• simplifying and removing complexity across qualifications and units of competency and making better use of industry and educational expertise, and
	• greater training product flexibility and enhanced responsiveness to changing industry needs through shorter courses with improved pathways advice to employment and further education opportunities." p 6-7
	
	"**Questions for consideration**: The following discussion questions are provided as prompts to assist your thinking prior to survey completion.
	• What is your experience of high-quality training – what made it high quality?
	• What is your experience of poor-quality training – what made it poor quality?
	• What limitations do you face as an RTO that is trying to deliver high quality training?
	• How effective are the Standards for RTOs 2015?
	  • What are the strengths of the Standards?
	  • What are the weaknesses and gaps?

Document	Relevant Key Points
	• Are they effective in promoting quality? In which areas? • Should the minimum standard be higher? If so, in which areas and how could this be achieved? • In what ways could specific clauses in the Standards be improved? Can you provide examples?" p 7
Dept of Prime Minister and Cabinet (2019). Strengthening Skills: Expert review of Australia's vocational education and training system. Commonwealth of Australia	"While the changes to work and 'new skills' attract many of the headlines, there are industry-specific jobs that are currently in high demand and will remain so in the future.11 The Government's agenda of new infrastructure projects will require increased numbers of skilled construction workers, the increased digitisation of the economy will require more people with information and communications technology (ICT) skills, and our ageing population will need personal carers with appropriate skills. Technology changes will affect how we work in most industries, but the purpose of many occupations will remain fundamentally unchanged. To be work-ready, graduates have always needed a combination of technical skills and general employability. While the balance of these skills may shift, we should expect students will continue to need training that builds both. Training should aim to equip students with the skills needed for their first job, and the flexibility and adaptability to navigate future career transitions. As we cannot fully predict the future workforce landscape and the skills required, we also need a system that supports workers to upskill or retrain throughout their lives. In our increasingly computerised world, digital skills will be critical for the vast majority of workers." p 8 "The Government has committed to the creation of a further 1.25 million new jobs over the next five years. The Department of Jobs and Small Business projects that the largest share of new jobs over this period will be in Health care and social assistance, the Construction industry, Education and training, and Professional, scientific and technical services.[87] These projections also predict that 90 per cent of all new jobs will require some form of post-school education. In view of Australia's ageing population and the operation of the National Disability Insurance Scheme, the Department of Jobs and Small Business (DJSB) projects that employment of aged and disability carers will increase by 39 per cent over the five years to May 2023. Additionally, ICT support technicians are projected to increase by 19 per cent and chefs by 17 per cent over the same period.[88]" p 9 "Businesses are able to use migration to help meet their skills needs. In 2017–18 around 111,000 people entered Australia through the Skill stream of the Migration Program, of which 6,640 were for Technician and trades workers occupations.[89] In addition to permanent skilled migration, employers are able to meet short term skills needs through temporary visas. As at 30 June 2018, there were 83,470 temporary skill visa holders in Australia, of which 23,010 were for Technicians and trades workers occupations and a further 1,540 were for Community and personal service workers.19[90] With changes to Australia's approach to skilled visas and significant projected employment growth in certain occupations, there will be further pressure to digitise and automate to fill skills gaps. It is critical that the vocational education sector is able to deliver quality training in a flexible and innovative manner to help prevent skills gaps from emerging and to keep pace with the rate of technological change." p 10 "From 2012 to 2017, government-funded VET enrolments fell by around 23 per cent. This was driven by several policy changes, including the withdrawal of employer incentives for existing worker traineeships and tightening of the entitlement schemes in several jurisdictions, including Victoria and South Australia.[91] Government-funded VET enrolments in 2017 were very similar to 2004 levels. See Figure 1.2 for trends in total and government-funded students from 2003 to 2017." p 12

[87] Department of Jobs and Small Business 2018, Industry Employment Projections, five years to May 2023 Canberra: Australian Government.
[88] Department of Jobs and Small Business 2018, Occupation Employment Projections, five years to May 2023 Canberra: Australian Government.
[89] Department of Home Affairs 2018, 2017–18 Migration Program Report: Program year to 30 June 2018, Canberra: Australian Government. Note: These data refer to primary visa holders (whose skills are assessed against an occupation for visa purposes) and secondary visa holders (that is, spouses and dependents who are not assessed against an occupation or aligned to an occupation for visa purposes).
[90] Department of Home Affairs 2018, Temporary resident (skilled) report at 30 June 2018, Canberra: Australian Government. Note: Data refer to primary visa holders for both subclass 457 and 482.
[91] Hargreaves, Jo, Stanwick John and Skujins Peta 2017, The changing nature of apprenticeships 1996–2016, Adelaide: NCVER; Bowman, Kaye and Suzy McKenna 2016, Jurisdictional approaches to student training entitlements: commonalities and differences, Adelaide: NCVER.

Document	Relevant Key Points



p 12

"In 2017, of all VET students:

- nearly one-third were aged less than 25 years, around 42 per cent were aged 25 to 44 years and around 24 per cent were aged 45 years or over,
- 51 per cent identified as male, and 47 per cent as female,
- 28 per cent trained in regional locations and 3 per cent in remote or very remote locations. This compares to 27 per cent of the Australian population living in regional areas and 2 per cent living in remote or very remote areas,[92]
- 3 per cent identified as Indigenous, similar to the proportion of the total Australian population,[93]
- 4 per cent reported as having a disability, and
- 4 per cent were international students." p 12

"In 2017, there were nearly 3.4 million VET program enrolments. This includes enrolments in training package qualifications, skillsets and accredited courses and excludes subject-only enrolments. Nearly three-quarters (74 per cent) of program enrolments were in a training package qualification. Around 18 per cent were in a nationally or locally accredited course and 8 per cent were in a nationally or locally accredited skillset.

In 2017, there were 2.5 million reported program enrolments across 59 training packages. Business Services accounted for the largest share of enrolments (14 per cent), followed by Community Services (13 per cent) and Tourism, Travel and Hospitality (9 per cent). The top 20 training packages by enrolments in 2017 are shown in Figure 1.3." p 13

[94] p 13

[92] Australian Bureau of Statistics 2017, Census of Population and Housing – 2016, cat no. 2017.0. Canberra.
[93] Australian Bureau of Statistics, Census of Population and Housing – 2016, cat no. 2071.0.

Document	Relevant Key Points
	"At the qualification level, the most commonly enrolled qualifications were related to childhood education and care, and business. The top 10 enrolled qualifications are shown in Table 1.1." p 13

Table 1.1: Top 10 qualifications by enrolments from VET training packages, 2017[29]

	Number of enrolments	Percentage of total enrolments
Diploma of Early Childhood Education and Care	67,532	2.7%
Certificate III in Individual Support	61,935	2.5%
Certificate III in Early Childhood Education and Care	54,226	2.2%
Certificate III in Business	45,712	1.8%
Certificate II in Business	44,293	1.8%
Certificate I in Construction	42,600	1.7%
Diploma of Leadership and Management	41,205	1.6%
Certificate II in Skills for Work and Vocational Pathways	35,240	1.4%
Certificate II in Hospitality	34,922	1.4%
Certificate III in Electrotechnology Electrician	33,617	1.3%
Total training package qualifications	**2,507,352**	

[95] p 14

"In 2017, 54 per cent of employers used the VET system to meet their training needs, while 51 per cent arranged or provided unaccredited training to their staff. Large employers were more likely to use the VET system (85 per cent), compared with small employers (48 per cent).[96]" p 15

"**Key parts of the VET architecture**

The Commonwealth and State and Territory governments have joint responsibility for the VET sector. These arrangements, including objectives and outcomes, are set out in the National Agreement for Skills and Workforce Development (NASWD).

The States and Territories are largely responsible for the delivery and operation of VET in their own jurisdictions, including funding of RTOs and the matching of funded training delivery to local economic priorities.

Over time, the Commonwealth has become increasingly involved in VET policy particularly in the areas of qualifications and quality assurance. The Commonwealth and States and Territories share responsibility for the architecture that provides national qualifications that are recognised across all States and Territories. The Council of Australian Governments (COAG) Industry and Skills Council (CISC), comprising Commonwealth, State and Territory government industry and skills ministers, is mandated to provide leadership and direction for the sector.

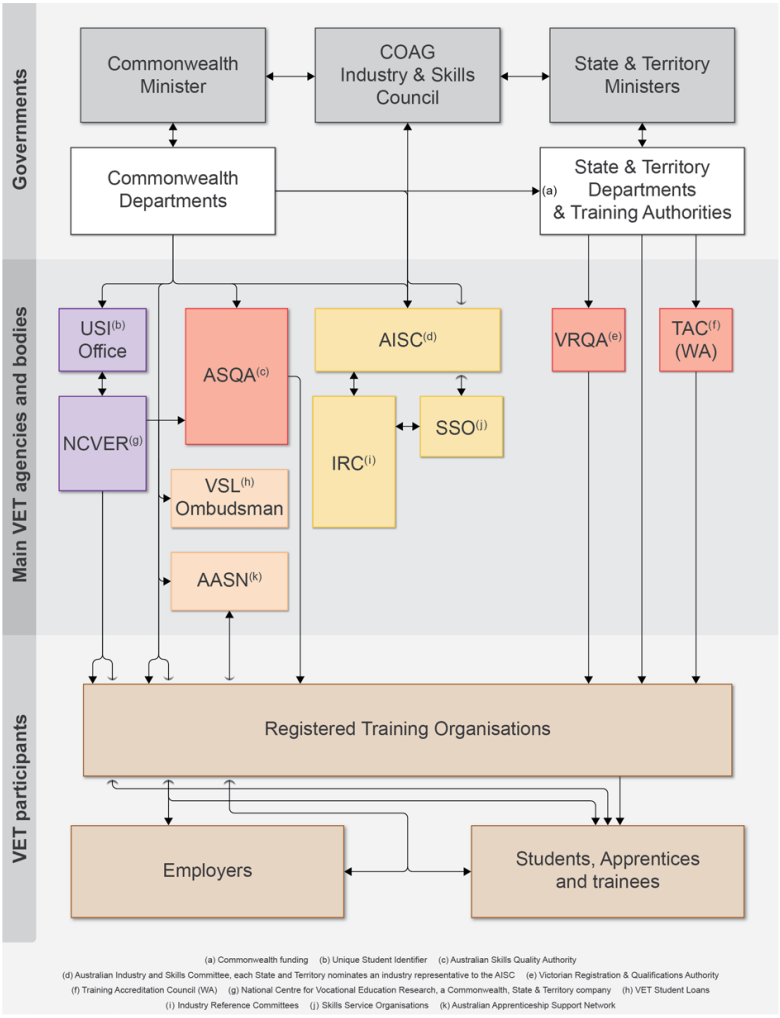
The Australian Industry and Skills Committee (AISC) comprises government-appointed industry representatives from the Commonwealth and each State and Territory who advise CISC on policy directions and decision making in the national training system as well as coordinating the development of training packages.

A training package is a set of nationally endorsed standards and qualifications for recognising and assessing people's skills in a specific industry, industry sector or enterprise. Training packages are developed by Industry Reference Committees (IRCs) working with Skill Service Organisations (SSO), to ensure that industry skill requirements are reflected in the national training system. Industry Reference Committees report to the AISC, which refers training packages to CISC for final approval.

The relatively new national regulator of VET, the Australian Skills Quality Authority, registers training providers, monitors compliance with national standards and investigates quality concerns, for all States and Territories that have referred their powers. In the two States that haven't referred, Victoria and Western Australia, ASQA regulates

[94] NCVER 2018, National VET Provider Collection (accessed via VOCSTATS).
[95] NCVER 2018, National VET Provider Collection (accessed via VOCSTATS).
[96] NCVER 2017, Australian vocational education and training statistics: employers' use and views of the VET System 2017, Adelaide: NCVER.

Document	Relevant Key Points
	providers who enrol international students and multi-jurisdictional providers while remaining RTOs are registered with the Victorian Registration and Qualifications Authority and the Training Accreditation Council Western Australia." p 16



p 17

"For government-funded VET programs, the completion rate was 39 per cent for programs commenced in 2014, a slight decrease from 40 per cent for courses commenced in 2012. NCVER projects that the completion rate for all VET programs commenced in 2016 will be 47 per cent. Government-funded VET programs commenced in 2014 at the diploma level and above had the highest completion rate, 51 per cent, compared to other VET qualification levels. NCVER has projected that in 2016, certificate IV programs will have the highest completion rate at 54 per cent.[97]" p 22

"Employment outcomes for VET students are generally positive. In 2018, around 59 per cent of students who graduated from a VET course in 2017 stated that their employment status had improved after the training.[98] Of those who were not employed before training, 48 per cent were employed after training – this was similar regardless of whether they completed a subject or a full qualification." p 23

"Employer satisfaction with the Australia VET system has been declining in recent years. In 2017, a survey of employers with jobs requiring VET found that approximately 75 per cent were satisfied that vocational qualifications provide employees with the skills they need for the job. This compares with a peak of 85 per cent in 2011. Employer satisfaction is now at its lowest rate in 10 years.[99] In 2017, 78 per cent of employers with apprentices and trainees were satisfied that students were obtaining skills they need from training (down from 82 per cent in 2015), while 82

[97] NCVER 2018, VET program completion rates 2016, Adelaide: NCVER.
[98] NCVER 2018, Australian vocational education and training statistics: VET student outcomes 2018, Adelaide: NCVER.
[99] NCVER 2017, Employers use and views of the VET System 2017, Adelaide: NCVER.

Document	Relevant Key Points
	per cent of employers who were using nationally recognised training were satisfied with training (down from 84 per cent in 2017). Of the 11 per cent of employers that were dissatisfied with vocational qualifications, poor training quality, not teaching relevant skills or not enough focus on practical skills were raised as the prevailing concerns.[100] In comparison, of the 51 per cent of employers who used unaccredited training in 2017, 89 per cent reported that they were satisfied with this training. Of the employers who used unaccredited training, 11 per cent said there was comparable nationally recognised training available. When asked why they chose unaccredited training instead, the most common reasons were cost effectiveness (37 per cent) or that the approach was tailored to their needs (26 per cent). A further 25 per cent of the employers using unaccredited training did not investigate the availability of national training, with other research suggesting a lack of awareness and the complexity of VET are both barriers to employers engaging with the system.[101]" p 23-24 "Students reported relatively high levels of satisfaction with VET with 87 per cent of 2017 qualification graduates satisfied with the overall quality of training. This result was slightly higher than the previous year (85 per cent). Domestic fee-for-service graduates recorded slightly lower satisfaction rates (86 per cent) compared with Commonwealth and State or Territory funded graduates (87 per cent). In 2018, 90 per cent of students who had completed subjects reported that they were satisfied with the overall quality of training. Unlike graduates, fee-for-service subject completers recorded higher satisfaction rates (92 per cent) compared with government-funded subject completers (80 per cent).[102]" p 24 "Internationally, Australia's education system is well regarded and highly attractive to international students. In 2018, the VET sector accounted for approximately 27 per cent of all international student enrolments in Australia, with a total enrolment of approximately 240,000 in VET, an increase of 14 per cent from the preceding year. India (12 per cent), China (9 per cent) and Brazil (8 per cent) are the top three source countries for enrolment in VET in Australia.[103] Annual growth is likely to continue, with VET enrolments projected to experience the greatest growth from the Philippines and India.[104] A survey of international students found 82 per cent of those studying in the VET sector indicated that Australia was their first choice for overseas study, with students expressing an overall satisfaction rate of 87 per cent.[105]" p 25 "The key issues being experienced in the VET sector by those who participated in the Review can be summarised as follows: • Continuing variations in quality between providers, and concerns about the relationship between the regulator and providers. • A cumbersome qualifications system that is slow to respond to changes in industry skills needs. • A complicated and inconsistent funding system that is hard to understand and navigate, and which is not well matched to skills needs. • A lack of clear and useful information on vocational careers for prospective new entrants. • Unclear secondary school pathways into the VET sector and a strong dominance of university pathways. • Access issues for Aboriginal and Torres Strait Islander Peoples and second chance learners seeking skills that will help them obtain and stay in meaningful work." p 27 "Recent experiences of poor provider behaviour, unduly short courses and variability in the quality of training have tarnished the sector's reputation. The fallout from the now closed VET FEE-HELP scheme in particular was regularly raised as an issue during the Review. On top of that, there are the broader competitive issues that have been brewing for decades. Vocational education has been steadily losing the battle for hearts and minds with the university sector. Fewer young people aspire to undertake vocational education courses. Many consider VET as less prestigious and only for students who are of low academic ability.67[106] The Review's own student survey confirmed that a lower number of students aspire to VET careers. Competition from higher education providers is strong. Universities are offering sub-bachelor qualifications overlapping with qualifications offered in the VET sector. At the same time, increases in the school leaving age mean that more young people remain in school for longer. VET

[100] NCVER 2017, Employers use and views of the VET System 2017.
[101] White, Ian, Navida De Silva and Tony Rittie 2018, Unaccredited training: why do employers use it and does it meet their needs? Adelaide: NCVER.
[102] NCVER 2018, VET Student Outcomes 2018.
[103] Department of Education and Training 2019, International Student Data 2018, Canberra, https://internationaleducation.gov.au/research/International-Student-Data/Pages/InternationalStudentData2018.aspx).
[104] Deloitte Access Economics 2016, Growth and Opportunity in Australian International Education: A report prepared for Austrade, Canberra.
[105] Department of Education and Training 2017, International Student Survey Results for VET 2016, Canberra.
[106] Gore, Jennifer, Hywel Ellis, Leanne Fray, Maxell Smith, Adam Lloyd, Carly Berrigan, Andrew Lyell, Natasha Weaver and Kathryn Holmes 2017, Choosing VET: investigating the VET aspirations of school students, Adelaide: NCVER.

Document	Relevant Key Points
	providers, particularly the bigger TAFE providers, are feeling squeezed in the middle." p 27 "The Commonwealth and the States and Territories adopt a six point plan to improve the architecture of the vocational education system and grow its contribution to training Australians, including: • strengthening quality assurance, • speeding up qualification development, • simpler funding and skills matching, • better careers information, • clearer secondary school pathways, and • greater access for disadvantaged Australians." p 30 "Breaking down the VET umbrella into streams will improve monitoring of the system, allowing for the creation of new performance measures that better align to the intended purpose of each part of the VET system. This will support the identification and regulation of underperforming RTOs, while rewarding strong performers. The Commonwealth and the States and Territories agree new names and descriptions for each part of the vocational education sector, to be used to measure the performance of each distinct stream of provision: • qualification-based training that leads to vocational careers (including courses and skillsets), • short courses, • foundation education (lower level courses for language, literacy, numeracy and digital literacy), and • VET in schools." p 32 "There is an expectation that VET students are 'work ready' when they graduate. The most direct way to achieve this is to incorporate work-based training in qualifications. There is also an implicit expectation in the vocational education brand that it involves work experience. Currently, however, only 20 per cent of qualification-based vocational students undertake a traineeship or apprenticeship.[107] The other 80 per cent is institution-based, with only some undertaking true work experience, although the high number of people employed while training will include many who are gaining work-based experience. The OECD has proposed that modern vocational educational and training include a significant work-based component.[108] As a competency-based training system, vocational training should at least be providing evidence that students can demonstrate the skills they learn in a workplace setting. Given the close linkages between VET and industry, incorporating more work-based training would allow students to develop the experience and competencies expected by employers, as well as making the sector more attractive and unique. This would give employers a greater role and ownership of the training being delivered and make sure it is relevant for today's jobs." p 33 "**Variable quality and concerns about regulatory practice** Quality assurance is one of the parts of the VET system architecture that needs an upgrade. While much has already been done in this area, there remains more to do. Past problems with provider quality have caused some of the most serious reputational and confidence issues in vocational education. Variation in the quality of provision between providers was one of the biggest concerns raised by participants in this Review. While those concerns were undoubtedly and significantly coloured by unscrupulous behaviour in the now closed VET FEE-HELP scheme, it is clear some issues are more current. Many providers and employer representatives spoken with by the Review team were concerned about the continuing presence of what they called 'tick and flick' providers. These providers encourage people to complete qualifications in a much shorter time than is standard (for example completing what is generally acknowledged as a six month course over a three day weekend). It was argued that the presence of even a few such rogue providers gave the sector a continuing bad name. Some employer groups and RTOs noted that it could be superficially attractive to students to be able to obtain a qualification in a fraction of the time, but graduates would discover too late they have paid for a qualification that may not be valued or possibly even accepted by employers. A number of employers cited the presence of 'tick and flick' providers as eroding their confidence in vocational education, because of fear of being duped by such a

[107] NCVER 2018, National VET Provider Collection (accessed via VOCSTATS).
[108] Martin, John P 2018, Skills for the 21st Century: Findings and Policy Lessons from the OECD Survey of Adult Skills, OECD Education Working Paper No. 166, Paris: OECD.

Document	Relevant Key Points
	provider. At the heart of such issues is the challenge of ensuring 'competency' in a particular skill. In order to be deemed competent in the Australian vocational education system, individuals are expected to demonstrate a consistent application of knowledge and skill to the standard of performance required in the workplace, and to demonstrate an ability to transfer and apply skills and knowledge to new situations and environments. However, the model describes competency without reference to any benchmark level of time that may be expected to achieve such competency. It can be argued this provides a loophole for providers to assert competency when someone has acquired a relatively superficial level of understanding of a topic, with the resulting qualification not differentiating that graduate from someone who has a deeper and more thorough understanding of the skill and can demonstrate the application of the skill. It is important to point out that concern about poor providers is now perceived as a few bad apples ruining it for everyone else, and damaging the reputation of the sector as a result. While a few submitters to the Review believed that 'all private providers are bad and should be banned', most agreed that most providers, public and private, are doing a reasonable and professional job of training their students. NCVER survey results indicate that the Australian VET system generally provides high-quality training to its students. In 2017, a survey of employers found 75 per cent of employers with vocational qualifications as a job requirement were satisfied that these qualifications provide employees with the skills they need for the job. Additionally, 78 per cent of employers with apprentices or trainees were satisfied that students were obtaining skills they need from training, and 83 per cent of employers using nationally recognised training were satisfied that this training provides employees with the skills they need for the job.[109]" p 35 "Across Australia, ASQA regulates over 4000 RTOs, while in 2018 the Victorian Registration and Qualification Authority regulated 228 providers[110] and the Western Australia Training Accreditation Council regulated 224 providers.[111]" p 37 "**Skills Organisations to lead qualification development** The Review recommends that a true industry-owned approach to qualification development is introduced through the establishment of SOs. SOs would be led and owned by employer representatives and other relevant stakeholders (such as unions). SOs should control the qualification development process for their industries. Industry-owned and government-registered Skills Organisations to be set up to take responsibility for the qualification development process for their industries and to control their training packages." p 58 "**Short form credentials** There is currently no consistent definition of what a 'micro-credential' is in Australia. The AQF review uses the term 'shorter form credentials' to describe the range of training that is shorter than a qualification and not currently included in the AQF.[112] Some shorter form credentials are available in training packages and are nationally recognised. Skillsets are groups of accredited units of competency that together form a 'skillset' which is a level down from the full AQF qualification. This Review heard little commentary about skillsets, which suggests that they are not widely used or understood. Other shorter form credentials have no mapping to the AQF, for example, the current Australian system does not allow industry, students or employers to capture micro-credentials or ascertain their value against the AQF, meaning they lack any sort of national currency.[113] There is significant interest from employers and industry representatives in training staff in micro-credentials as an alternative to full qualifications. We were advised that micro-credentials could be particularly useful for upgrading skills of existing workers for new technologies. We were also told that employers often didn't need to train workers for full qualifications, and preferred to train them for the parts of qualifications relevant at the time. It is not clear why skillsets are not used by industry as 'micro-credentials'. Training workers for part-qualifications raises some interesting policy questions for government, particularly in relation to funding such activity. The main public policy rationale for government funding vocational training towards qualifications is that there is a public benefit obtained when people are trained for a recognised transferable qualification. This value is not necessarily captured by the person who obtains the qualification or, in the case of

[109] NCVER 2017, Employers use and views of the VET System 2017.
[110] Victorian Registration and Qualifications Authority 2018, Victoria's Education and Training Regulator Annual Report 2017–18, Melbourne: Victorian Government, p 14.
[111] Government of Western Australia 2018, Training Accreditation Council Annual Report 2017–18, Perth: Government of Western Australia, p 17.
[112] Department of Education and Training, 2018 Review of the Australian Qualifications Framework Discussion Paper, Canberra: Australian Government, p 14.
[113] Department of Education and Training, 2018 Review of the Australian Qualifications Framework Discussion Paper, Canberra: Australian Government, p 14.

Document	Relevant Key Points
	work-based learning, by the current employer. There is some question whether that public benefit rationale still applies if training doesn't lead to a recognisable qualification. This issue of short-form credentials is being considered by the AQF review, which is exploring whether a wider range of credentials could be included in the AQF. The Review is supportive of the concept of registering short-form credentials on the AQF and recommends further consideration of them following completion of the AQF review." p 64-65
Egan C (2023, Sept 21). "Agencies 'ripping off' aged care providers, poaching staff amid workforce crisis" The Weekly Source	As aged care providers struggle to meet new mandatory minimum staffing requirements during a workforce crisis, we are hearing reports that agencies are cashing in on the issue, charging exorbitant fees, adding additional services to bump up costs, and poaching staff only to hire them back to providers at jacked up prices. Agency staff cost providers $17.04 per bed day according to StewartBrown's 31 March 2023 Aged Care Financial Performance Survey Sector Report, an increase of $9.86 per bed day compared to the March 2022 period (when it was $7.18 per bed day). The additional charges for agency staff are not funded by the Government. The CEO of a Not For Profit aged care provider, who wishes to remain anonymous, told The SOURCE agencies are "ripping off" providers desperate for staff in regional areas, charging rates two to three times higher than usual, and adding to the costs with expensive hotels and transport. Respect CEO Jason Binder also told The SOURCE that they have seen an increase in agency costs. "Unfortunately, in many circumstances, this appears to have been because they [agencies] are taking advantage of the desperation of providers, particularly in the regional areas where we operate," he said. "We have also had agencies poach our staff and then contract them back to us, forcing us to recruit internationally and ultimately replace them anyway. Whilst it hasn't been all agencies, the amount of unscrupulous activity in this space has certainly left a sour taste in our mouth towards agencies, that won't go away in a hurry. We're a Not For Profit organisation which means any money we make goes towards caring for older people. Personally, I detest spending resources on agencies when it could have gone to our residents."
Easton T, Milte R, Crotty M & Ratcliffe R (2016). Advancing aged care: a systematic review of economic evaluations of workforce structures and care processes in a residential care setting. Cost Eff Resour Alloc (2016) 14:12	"Residential care is in the midst of a 'culture change' movement, involving organisational change and a move toward providing more person-centred, individualised care.[114] Person-centred care is also increasingly being recognised as an important focus for the care of individuals living with dementia. A social-psychological theory of dementia care, developed by Kitwood and Bredin,[115] links agitation to negative contextual stimuli that neglect personhood. According to the theory, warm and compassionate care interactions should increase well-being, while disrespectful and disengaged care interactions are thought to lead to decreased well-being and increased agitation. Questions remain, however, as to the optimal implementation approaches and staffing configurations to achieve a high quality residential care experience for residents. The framework of economic evaluation is increasingly being applied in health and aged care services in an effort to promote efficiency in the design and delivery of services. Knowledge of the incremental costs and effectiveness of differing program design features is essential for well-informed resource allocation decisions in residential care. Program design features can be broken down into subcategories to assist in the assessment of quality (see Donabedian[116]). This review focuses on the economic evidence of program features which directly relate to how care is provided in terms of the workforce and its operations (structures of care) and the services provided (processes of care)." p 2 "Four studies evaluated the costs and effects of enhanced staffing levels, including increasing the amount of direct nursing care time for each resident,[117] employing a fulltime occupational therapist,[118] increasing the staffing level of both physical and occupational therapists,[119] and implementing off-hours physician coverage via telemedicine.[120] Results suggest that enhanced staffing levels, whilst being associated with increases in staffing costs provide the potential for cost savings in other areas. For example, one study found that increasing registered nurse staffing in nursing homes to ensure 30–40 min of direct care time per resident per day reduced the incidence of pressure ulcers,

[114] Koren MJ. Person-centered care for nursing home residents: the culture change movement. Health Aff. 2010;29(2):312–7.
[115] Kitwood T, Bredin K. Towards a theory of dementia care: personhood and well-being. Ageing Soc. 1992;12(03):269–87.
[116] Donabedian A. The quality of care: how can it be assessed? JAMA. 1988;260(12):1743–8.
[117] Dorr DA, Horn SD, Smout RJ. Cost analysis of nursing home registered nurse staffing times. J Am Geriatr Soc. 2005;53(5):840–5.
[118] Schneider J, Duggan S, Cordingley L, Mozley CG, Hart C. Costs of occupational therapy in residential homes and its impact on service use. Aging Ment Health. 2007;11(1):108–14.
[119] Przybylski BR, Dumont ED, Watkins ME, Warren SA, Beaulne AP, Lier DA. Outcomes of enhanced physical and occupational therapy service in a nursing home setting. Arch Phys Med Rehabil. 1996;77(6):554–61.
[120] Grabowski DC, O'Malley AJ. The care span: use of telemedicine can reduce hospitalizations of nursing home residents and generate savings for medicare. Health Aff. 2014;33(2):244–50.

Document	Relevant Key Points
	hospitalisations, and urinary tract infection rates resulting in a net societal benefit of US$3191 per resident per year.[121] Similarly, another study reported that increasing the staff to resident ratio for physical therapists and occupational therapists was more effective at promoting, maintaining, or limiting decline in functional status. The resulting reduction in required care delivery resources was estimated to provide an annual cost saving to the institution of $283 per resident.[122] A third study which evaluated the benefit of a full-time occupational therapist reported a significant reduction in secondary health care costs (including hospital admissions) and an increase in the use of social services, though the cost of providing occupational therapy was not offset by the savings in health care.[123] Finally, a fourth study found that increasing the availability of physician care during the off-hours via a dedicated telemedicine service decreased annual hospitalisations by 11.3% annually.[124] Based on an average nursing home size of 113 beds, net savings to US Medicare were estimated to be $120,000 per annum for facilities which utilised the telemedicine service to a greater extent.[125]" p 11 "Another important finding from this review was the assimilation of currently available evidence relating to the costs and effectiveness of staffing levels in specialised models of residential care, including Green House facilities and dementia special care units.[126] [127] [128] [129]Green House facilities provide a small, home-like model of care as an alternative living environment to the traditional skilled nursing facilities in the United States. In the Green House model, ten to twelve residents live in a self-contained residence designed to look and feel like a private home. Dementia special care units (SCUs) are separate units within a residential care facility that have been adapted specifically for people living with dementia. Three out of four studies which evaluated staffing levels in specialised models of care (Green House facilities and dementia special care units) reported that these types of specialised models generally provided more direct care time to residents compared to traditional facilities.[130] [131] [132]Resource use and cost implications associated with staffing levels in specialised models of care, however, were conflicting across studies with no clear results. With regard to special care units, one study reported no difference in resource use once adjusted for case mix,[133] while the other reported higher resource use but made no adjustments for case mix.[134] Of the two studies on Green House facilities, one reported lower staffing requirements than traditional units[135] while the other reported increased staffing requirements of 2.0–2.5% compared to traditional facilities.[136] None of the studies evaluating staffing levels in specialised facilities established clinical effectiveness. Swanson, Maas and Buckwalter[137] did report significant results found with indirect outcome measures in the form of reduced catastrophic reactions and increased social interactions on special care units with the number of reactions decreasing from 156 pre-intervention to 48 at the 12-month follow-up in the SCU group compared to the control group which reported catastrophic reactions of 82 and 46 at pre-intervention and follow-up respectively (p = 0.035)." p 11 "One study evaluated the implementation of an evidence based staff education and best practice program targeting 'vision awareness' to improve staff knowledge of visual impairments and to reduce the incidence of falls.[138] It was estimated that the intervention resulted in a reduction in the number of annual falls between 5 and 12 in a typical

[121] Dorr DA, Horn SD, Smout RJ. Cost analysis of nursing home registered nurse staffing times. J Am Geriatr Soc. 2005;53(5):840–5.
[122] Przybylski BR, Dumont ED, Watkins ME, Warren SA, Beaulne AP, Lier DA. Outcomes of enhanced physical and occupational therapy service in a nursing home setting. Arch Phys Med Rehabil. 1996;77(6):554–61.
[123] Schneider J, Duggan S, Cordingley L, Mozley CG, Hart C. Costs of occupational therapy in residential homes and its impact on service use. Aging Ment Health. 2007;11(1):108–14.
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	200-bed nursing home in New York State. Depending on estimates used for the cost of falls, the net societal benefit ranges between a net loss of US$26,000 and a net saving of US$52,000 calculated in 2008 US dollars." p 11 "Four studies conducted facility-level interventions aimed at improving the quality of care.[139] [140] [141] [142] Interventions included an advance directive program to educate and assist residents with a written expression of their wishes to guide family and health care workers in their care choices,[143] an intervention to reduce acute care transfers through the early identification, assessment, communication, and documentation of changes in resident status,[144] a quality improvement intervention involving monthly visits and support by expert nurses,[145] and a fracture prevention program for all residents upon admission to a residential care facility.[146] The advance directive program,[147] the intervention to reduce acute care transfers,[148] and the multifactorial fracture prevention program[149] were all found to reduce hospitalisation rates, resulting in cost savings from a broader health care perspective. The quality intervention with expert nurses was found to improve quality of care (measured with the Observable Indicators of Nursing Home Care Quality (OIQ) instrument.), and reduce the incidence of pressure ulcers and weight loss.[150] In all four studies, the increased costs associated with implementation of the interventions were borne by the aged care facility." p 15
Flinders University (2020). Review of International Systems for Long Term Care of Older People. Royal Commission Research Paper.	"Internationally, there is debate regarding the value of mandated care recipient-to-staff ratios and of mandates on staff qualifications within these ratios. While it could be argued that staffing levels are a key factor in quality, reviews have found conflicting results, indicating both that higher total staffing levels are associated with improved quality of care[151] and that there is no clear relationship.[152] A systematic review has suggested increasing staff-to-resident ratios or additional staff training may offer potential cost savings over time from a societal perspective by reducing healthcare costs.[153] Some nations have mandated recipient-to-staff ratios within institutional care (including the USA, Japan, Canada, Germany, Vietnam and the Republic of Korea) but there is large variation in legislated staffing requirements for residential aged care.[154] While there is an assumption that more staff with higher education backgrounds will ensure better quality of care and quality of life for the residents, there is currently a lack of consistent evidence to confirm or refute this.[155] In Australia, it has been suggested that a skills mix in residential care of 50% nurses (30% registered nurses and 20% enrolled nurses) and 50% personal care assistants is the minimum requirement for safe residential aged care.[156] A 2012 review concluded that nurse staffing standards improve staffing levels [40]. However, some alternative models

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[146] Müller D, Borsi L, Stracke C, Stock S, Stollenwerk B. Cost-effectiveness of a multifactorial fracture prevention program for elderly people admitted to nursing homes. Eur J Health Econ. 2015;16(5):517–27.
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[148] Ouslander JG, Lamb G, Tappen R, Herndon L, Diaz S, Roos BA, Grabowski DC, Bonner A. Interventions to reduce hospitalizations from nursing homes: evaluation of the INTERACT II collaborative quality improvement project. J Am Geriatr Soc. 2011;59(4):745–53.
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156 Willis E, Price K, Bonner R, Henderson J, Gibson T, Hurley J, Blackman I, Toffoli L and Currie T, Meeting residents' care needs: A study of the requirement for nursing and personal care staff. 2016, Australian Nursing and Midwifery Federation: Melbourne, Australia.

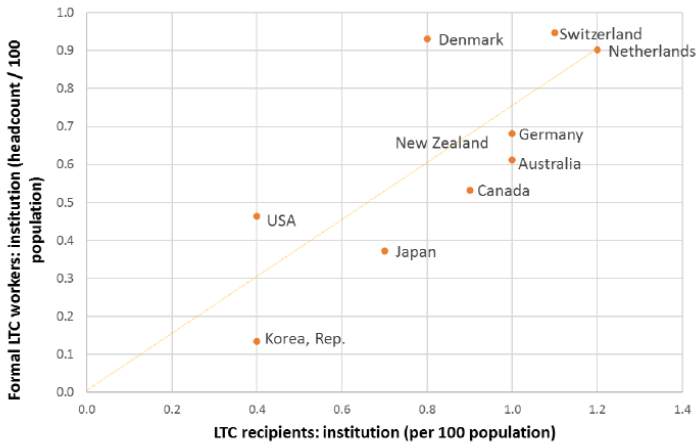
Document	Relevant Key Points
	of residential aged care operate with staff in less traditional care roles who have had high levels of training provided by the care home operator. [157] [158] [159] It has been suggested that "mandating a set staffing level may stifle innovation, and even lead to some 'high performing' aged care facilities to reduce their staffing levels".[160] An analysis from the USA indicated that the introduction of mandated minimum nursing staffing levels in some states increased staffing in the low-staffed nursing homes, partly by the use of lower-paid nurses, but also that nursing homes that had higher staffing levels before the introduction of regulation decreased their staffing.[161]" p 8 "Figure 13 and Figure 14 show a fairly direct relationship between the number of LTC workers and care recipients in institutions across most countries. Australia, along with Japan, Korea and Germany, appears to have numbers of total workers at the lower end of the range when compared with other countries. Nations that appear to have higher levels of staffing per care recipient in institutional care include the USA, Denmark and to a lesser extent New Zealand and Switzerland. These observations on headcounts of LTC workers were generally reflected in the data available for FTE staffing in institutions (see Appendix 3, Figure 29); however it becomes more apparent that Australia may have lower levels of staffing per care recipient than other nations when FTE data are considered. The number of nurses in institutions relative to the number of recipients in Australia also appears at the lower end of the range compared to other nations (Figure 14). The USA, Germany and Switzerland appear to employ a greater number of nurses in institutional settings (Figure 14). In Germany and Switzerland in particular, nurses are likely to make up a greater proportion of the total workforce. Canada has slightly more nurses per head of population for fewer care recipients, i.e. also a higher relative level of staffing than Australia." p 46-47 **Figure 13. Number of formal LTC workers with respect to total population, institutional settings**  Source: LTC recipient data extracted on 6 May 2019 from https://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT. Formal LTC worker values calculated based on data extracted on 6 May 2019 from https://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT and https://databank.worldbank.org/data/source/world-development-indicators

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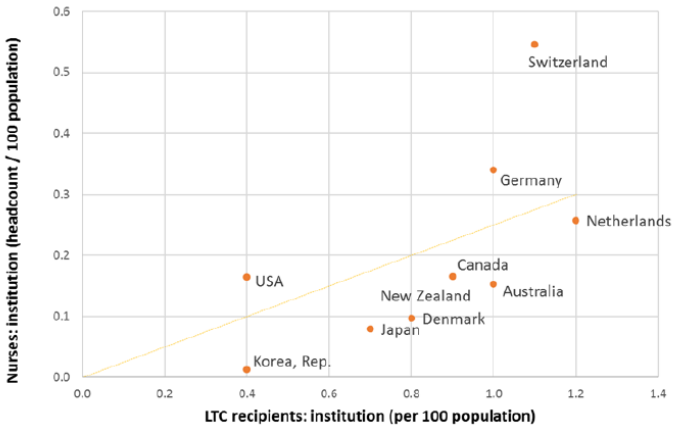
Figure 14. Number of nurses working in LTC with respect to number of recipients of LTC, institutional settings

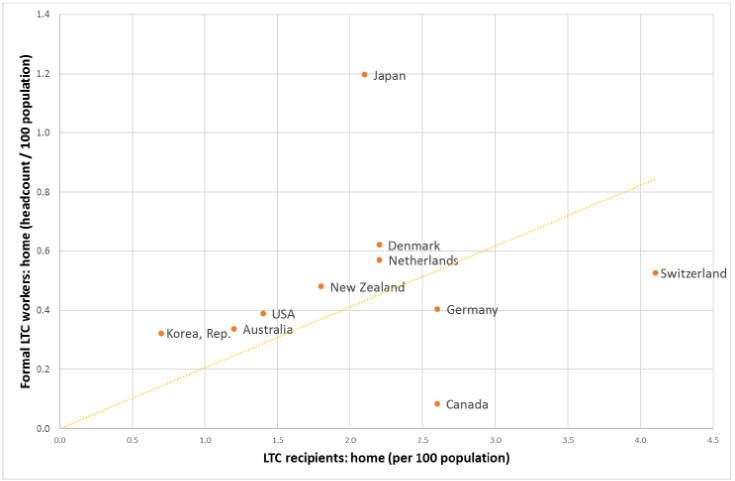


Source: LTC recipient data extracted on 6 May 2019 from https://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT. Nurses working in institutional care values calculated based on data extracted on 6 May 2019 from https://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT and https://databank.worldbank.org/data/source/world-development-indicators.

"As described under "Care recipients" (Chapter 3), data on home care recipients generally exclude people who only need assistance with instrumental activities of daily living such as shopping and cleaning, although adherence to this definition between nations is variable.

The number of total LTC workers in Australia providing home care appears similar to most other nations at the national level (Figure 15). These data on headcounts are generally reflected in the data available on FTE workers (Appendix 3, Figure 29 and Figure 30). Germany, Canada and Switzerland appear to provide a lower number of total workers per recipient in home care. The data for Switzerland and Canada may be understated due to the inclusion of some recipients of informal care. Switzerland also includes recipients of support for IADLs alone in addition to ADLs. The number of nurses providing home care in Australia appears low, along with Korea, New Zealand and Canada, in comparison to many other nations (Figure 16), though Canada may be understated due to the inclusion of some recipients of informal care at home and New Zealand may be understated by the inclusion of recipients of IADL services. Germany and Switzerland appear to have high levels of nurse staffing in home care despite having low numbers of total workers compared with other nations. Denmark also has a relatively high level of total workforce and nurses in home care settings. The number of nurses in relation to recipients is lower in Australia than in the USA. The USA and Australia appear to have comparable data as both exclude recipients of IADL services from the home care recipient data. Japan provides the greatest total number of care workers in home care, but a moderate number of nurses (Figure 15 and Figure 16). Care workers are registered in Japan so the count of the number of care workers may be more complete. Data from Japan may include some double counting of recipients." p 48-49

Figure 15. Number of formal LTC workers with respect to number of recipients of LTC, home care settings



Source: LTC recipient data extracted on 6 May 2019 from https://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT. Formal LTC worker values calculated based on data extracted on 6 May 2019 from https://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT and https://databank.worldbank.org/data/source/world-development-indicators.

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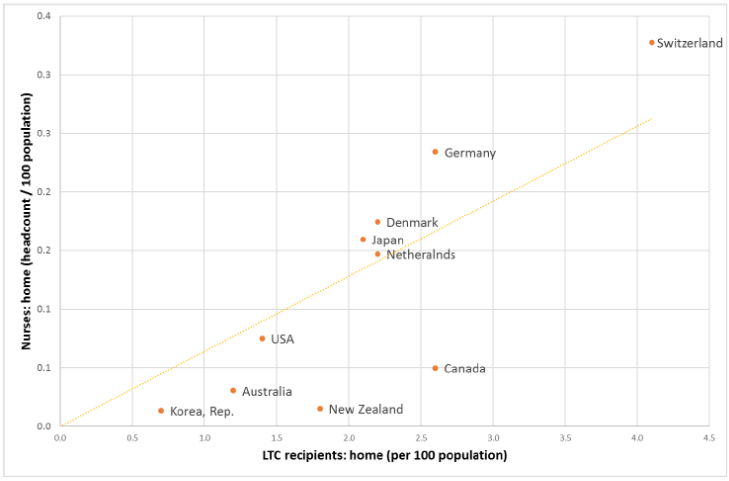
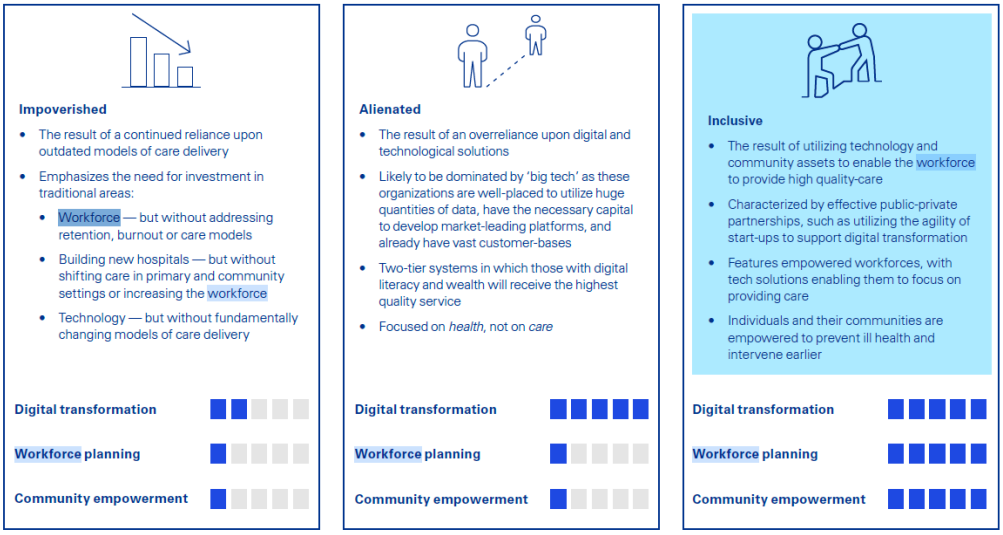
	Figure 16. Number of nurses working in LTC with respect to number of recipients of LTC, home care settings  Source: LTC recipient data extracted on 6 May 2019 from https://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT. Nurses working in home care values calculated based on data extracted on 6 May 2019 from https://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT and https://databank.worldbank.org/data/source/world-development-indicators.
KPMG (2021). Healthcare Horizons: Healthcare System Transformation and the Journey Towards Inclusive Care. KPMG International	"To build resilience into their organizations, health leaders should carefully consider how the successive waves of crises and pre-existing undercurrents will impact their organizations and factor these circumstances into their investment and planning approaches." p 5 **At KPMG, we see healthcare leaders struggling to keep their organizations afloat amid healthcare's perfect storm of pre-pandemic undercurrents and successive waves of crises and would like to extend a helping hand in the form of insights. When projecting where the storm will leave healthcare, we foresee three possible scenarios:**  8 Healthcare Horizons

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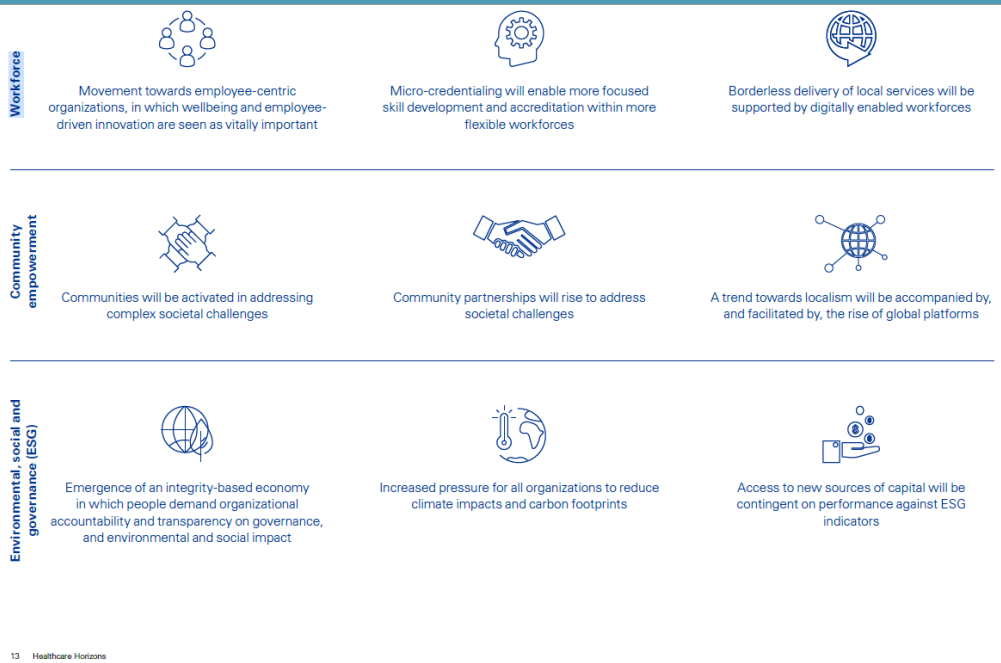

"Although technology is changing healthcare, it is, and will remain, a people-driven business. But the growing demand for care and the immense stresses placed on the healthcare workforce have worsened the global workforce crisis. In response, the same tired approaches are often proposed: to either hire, or train, more doctors and nurses. But there are only a finite number of healthcare professionals in the world, while current training approaches are lengthy. To address these challenges the healthcare workforce of the future will consist of a more diverse array of roles and people will be trained differently. To support inclusive healthcare systems, organizations will become employee-centric, improving digital enablement to liberate health professionals from routine work, and supporting the workforce to build the skills they need for the future." p 17

"***Prediction: A hybridized and micro-credentialed workforce will function based on their skills, not their roles*** With rising service demand and a critical global shortage of traditional healthcare cadres such as doctors and nurses, healthcare systems will seek to adopt the next progression of the existing trends of task-sharing and micro-credentialing. With micro-credentialing, workforce planning will no longer be done on the basis of "tasks for physicians and nurses," but rather an extensive list of tasks to be performed, with every worker individually classified according to their specific skills, training and performance. This means that non-clinical or even lay workers will be trained and 'micro-credentialed' for various tasks. In the future, a significant amount of healthcare tasks will be conducted through micro-credentialing. Individuals will learn bite-sized content focused on development of a specific skill, demonstrate competency through an assessment and have a 'credential' issued to provide recognized verification of the skill. This will be a fundamental shift from the current professional silos and guilds of most health systems but will create tremendous flexibility in three ways. First, the ability to rapidly increase, decrease or pivot the health workforce far quicker than current systems, which can take up to 10 years to train specialist doctors or nurses. Secondly, the emphasis on keeping skills constantly up-to-date and assessed rather than relying on undergraduate education as the primary 'credential' for most clinicians. Thirdly, the ability to validate patients, peers and caregivers more formally as a vital and legitimate part of the health workforce." p 17

"***Prediction: A globalized health workforce will offer 24/7, 365-day care, with complex cases delivered globally*** The shift to 'micro-credentialing' will eventually need to happen at scale if workers are to benefit from career progression and transferability of their skills. Alongside the drive towards integrated care, this will lead to more staff moving to 'system employment' rather than organizational employment in the coming years. Micro-credentialing will also tap into a new, more informal workforce pool, helping to free up traditional healthcare staff so that they can work across the care continuum, while providers can achieve maximum productivity from staff time. This medium-term trend may rapidly be eclipsed by a truly global market for health workers. The rise of AR and VR will allow health professionals to work for systems around the globe, or even for multiple systems at the same time, without the need to move abroad. The widespread adoption of micro-credentialing is a key enabler of this, with employees adopting protocols required by each system for their respective patients (as is already the case in multi-payer systems where clinicians adapt care according to a patient's insurer). Virtual care workers won't only be employed to see patients but also to supervise. For example, a specialist surgeon from a center of excellence might observe and advise a surgeon from a less specialized center using a VR headset that allows them to 'see what they see' in real time. Within

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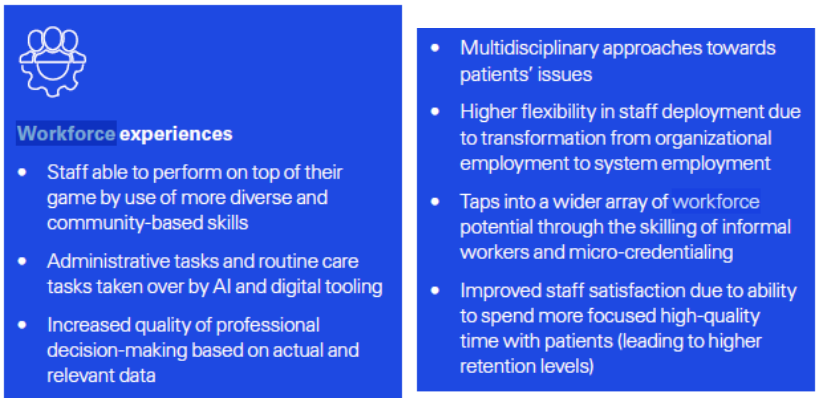
	communities, the same principles can be applied to support those in informal care roles. VR and AR offer the opportunity to 'help the helpers,' providing engaging and immersive training, as well as emotional support through buddying and virtual communities, while micro-credentialing would offer formal recognition of their skills." p 17



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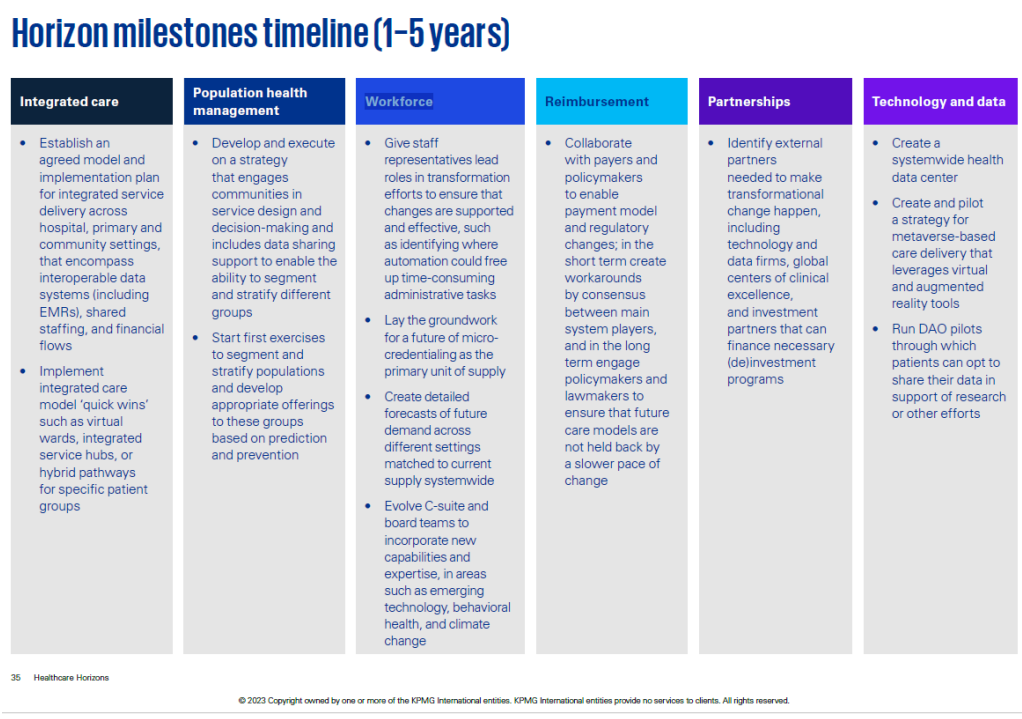

"Caregivers and community members can be micro-credentialed in the same way as staff, blurring the boundaries between patients, citizens and the workforce. Healthcare workers will be employed across systems, rather than for specific organizations, and healthcare workforces will likely include informal workers as well as many staff based overseas. Yet in other ways, inclusive healthcare systems of the future will be quite unlike that of today's technology giants. There will be strong links with, and democratic accountability to, citizens and community groups, who will 'own' (whether formally or informally) a major stake in their local providers, who will give them sway in decision-making, and who will rely on their support to operationalize a decentralized model of data sharing through community-owned DAOs. The emphasis will be on supporting self-management through choice and personalization, rather than any need to drive ever-greater engagement with 'the system.'" p 36

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	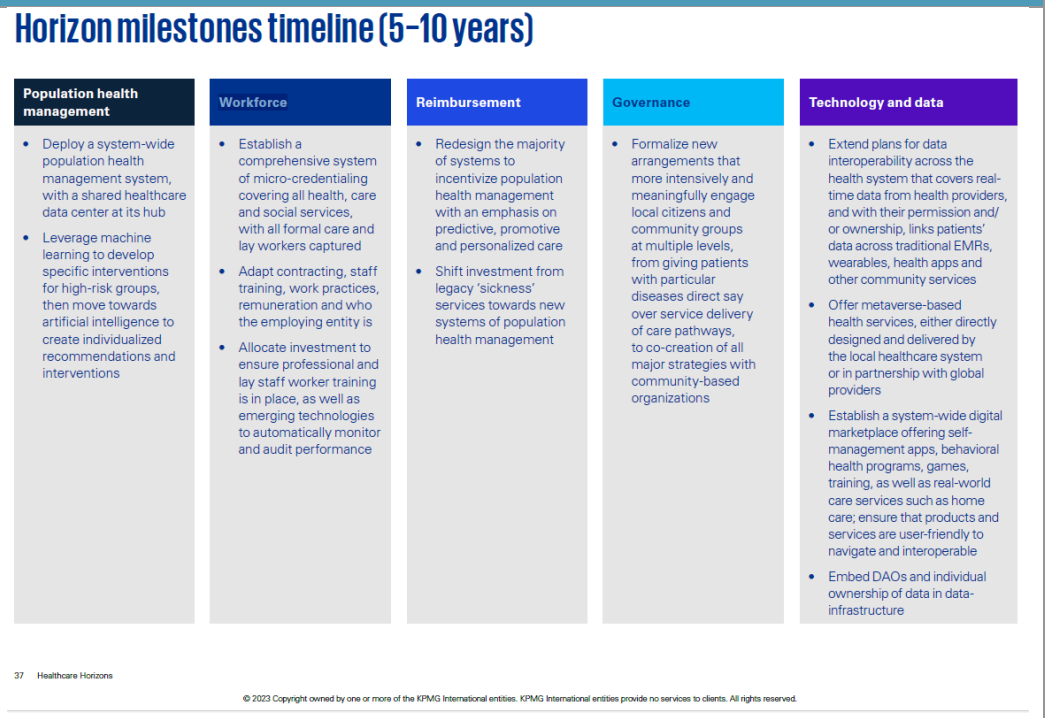
Miller C (2005). Aspects of Training that meet Indigenous Australians' Aspirations: A systematic review of research. National Centre for Vocational Education Research	**Key research question**: "For Indigenous Australians, what are the key features required in the planning, design and delivery of VET and ACE learning programs to ensure positive educational, employment and social outcomes?" p 11 **What are the factors required for Indigenous Australians to achieve positive outcomes from training?**... community ownership and involvement; Indigenous identities, cultures, knowledge and values; true partnerships; flexibility in course design, content and delivery; quality staff and committed advocacy; student support services; funding and sustainability. All of these themes and factors are closely interrelated. A number of the reviewed studies find that if the factors from each of the seven theses are incorporated comprehensively into the relevant context, the outcomes achieved by the students will be much greater than if only 'bits and pieces' had been applied in an ad hoc way or not at all. It must be emphasised that limited or poor implementation of any of these factors will act as a barrier to the effectiveness of training programs and the achievement of positive outcomes for Indigenous Australians." p 24 **Community ownership and involvement** "In all contexts, the formal involvement of Indigenous people in the management and implementation of training programs is predicated on the development of personal relationships and mutual trust and localisation of programs" p 26 **Indigenous identities, cultures, knowledge and values**: "Training needs to be structured around knowledge-sharing between teachers and students as individuals, which is based on an exchange between Indigenous and western bodies of knowledge and cultures.[162] This is expressed as 'both ways' training, in which students' individual and cultural knowledge is valued and incorporated equally alongside the western knowledge that traditionally forms the basis of mainstream course content… The acknowledgement of individuals' experiences, cultures and backgrounds can be more effectively incorporated through an increased use of recognition of prior learning and credit transfer." p 27 **True partnerships**: "Flexibility should be built into any agreements to allow for changes to occur, as not all issues and obstacles can be anticipated from the start. The need to plan as much as possible for all contingencies; for instance, changes in resources, weather and cultural business, must be balanced with the ability to react to other unforeseen issues. Ideally, the formalisation of relationships that are true partnerships (not just in name) reduces the need for a system that is reactive and deficit-focused." p 28 **Flexibility in course design, content and delivery**: "Where training is developed and expected to contribute to community development goals, the training itself should include components of Indigenous knowledge that must be

[162] Marika B, Lane C, Smith H & Reinke L (2004). 'Working toward an Indigenous training model: Learning from Gamarrwa Nuwul Landcare, Yirrkala', in *Equity in vocational education and training: research readings*, ed. K Bowman, NCVER, Adelaide, p 80

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	developed and assessed by local Elders and other community members. This is found to be critical in the Indigenous-controlled providers in study 40 [Boughton & Durnan 1997][163]." p 31 "Training that is physically and theoretically located within the workplace of both paid employment and community work is found to increase the chances of achieving the full range of positive outcomes." p 31 **Community-based training delivery**: "Another benefit of community-based delivery of training is that it has the potential to provide paid and unpaid employment opportunities within communities. If it can be established in a sustainable way with local people trained as trainers, it can form a critical part of a locally developed economy and contribute to broader community development goals." p 32 **Quality staff and committed advocacy**: "The employment of Indigenous people as teachers, tutors, mentors, leaders, senior public servants, researchers, administrative and support staff is a clear means through which the VET system can more appropriately incorporate community ownership, direction and aspirations. These people provide the crucial cultural link between the daily operations of training programs, the community and the training provider and system[164]." p 34 **Cultural awareness and support**: "To avoid the appointment of poor-quality or inappropriate teachers and tutors in TAFE institutes, study 69 [Dept of Employment, Education and Training, 1994] recommends that Indigenous communities should have an active role in selecting staff, particularly in Indigenous-specific programs.[165] In the Indigenous education units of TAFE institutes, study 45 [Robinson & Hughes, 1999] finds that students report high levels of satisfaction with the support provided by staff in these units. It identifies 'the informality, flexibility and cultural sensitivity of staff' as important.[166] Indeed, the authors conclude from their fieldwork and survey that: Having flexibility in the approach and particular teaching/instructor characteristics [caring attitudes, respectful manner, competence in the subject] are likely to be the most critical determinants of success amongst Indigenous students.[167] This is further emphasised in study 62 [Dept of Education, Training & Youth Affairs et al, 2000] which finds Indigenous students prefer a teaching style and learning environment based on adult learning principles, including teachers who are 'flexible, informal, inclusive, interactive and friendly'.[168] Study 69 [Dept of Employment, Education and Training, 1994] also finds this the case, noting the essential skills and qualities of teachers for Koori students as understanding, previous experience and appropriate qualifications, flexibility in being able to adapt curriculum for their students, and an openness and receptiveness.[169]" p 35 **Student support services**: "The provision of support services by training organisations and their networks of support—including educational, financial, social and cultural support—is essential to ensure that Indigenous people are able to access and remain in training, leading to positive and improved outcomes." p 35 **Funding and sustainability**: "Funding is a key factor in ensuring that good practices can be fully and appropriately implemented. It frequently operates as a barrier, given the way in which most funding models are found to limit long-term planning." p 37
Nordregio (2021). Recruitment and retention in the Welfare Sector: Nordic good practice. Policy Brief 2021:1	"The Nordic welfare sector is facing significant challenges when it comes to providing effective social care services. While the demand for services for a rapidly growing elderly population is constantly increasing, the workforce delivering social care services is shrinking, with many workers reaching retirement age. Tackling the challenges related to recruitment and retention of qualified staff – and developing innovative approaches to the delivery of social care services – is becoming increasingly urgent, particularly in rural and sparsely populated areas (SPAs)." p 2 "The capacity to deliver social care services, and meeting the changing needs of different populations, depends strongly upon the availability of a suitable workforce. Social care professions are at the top of the list of jobs with the highest recruitment needs in many municipalities across the Nordic Region.[170] [171]This situation has been triggered by

[163] Boughton B & Durnan (1997). Best practice and benchmarking in Aboriginal community-controlled education, Federation of Independent Aboriginal Education Providers, Canberra, p 21
[164] Boughton B & Durnan (1997). Best practice and benchmarking in Aboriginal community-controlled education, Federation of Independent Aboriginal Education Providers, Canberra,
[165] Department of Employment, Education and Training (1994). On the same level: Case studies of five Aboriginal adult education programs, Commonwealth of Australia, Canberra, p 29
[166] Robinson C & Hughes P (1999), Creating a sense of place: Indigenous peoples in vocational education and training, NCVER, Adelaide, p 58
[167] Robinson C & Hughes P (1999). Creating a sense of place: Indigenous peoples in vocational education and training, NCVER, Adelaide, p 61
[168] Department of Education, Training and Youth Affairs (Australian Government), Tasmanian Office of Vocational Education and Training (OVET Tasmania), Small Business Professional Development Best Practice Programme (Australian Government) and Indigenous Business Economic Council (NSW) (2000). Our business, our way: Indigenous perspectives on small business learning—An evaluation of Indigenous projects in the Small Business Professional Development Best Practice Programme, Office of Vocational Education and Training, Hobart, p 13
[169] Department of Employment, Education and Training (1994). On the same level: Case studies of five Aboriginal adult education programs, Commonwealth of Australia, Canberra, p 29
[170] TEM (2019) Occupational barometer: Labour shortage in many occupations - Ministry of Economic Affairs and Employment. Available at: https://tem.fi/en/-/ammattibarometrityovoimapula-vaivaa-yha-useampaa-ammattia (accessed 15 January 2021).

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	demographic changes and by the retirement of large numbers of people. Many workers are approaching pension age in the Nordic Region. This will threaten municipalities' ability to provide services. In Finland, for instance, approximately 12,500 (25%) of nurses are expected to retire over the next ten years within the municipal sector.[172] In Sweden, the total number of retirees in the welfare sector is expected to reach 340,000 people during the same time period,[173] with retirement numbers higher than the national average in remote and very remote regions.[174]" p 3 "Many rural areas facing challenging demographic developments also have difficulties when it comes to recruitment into the social and health care sectors. This may typically include advertised positions that left unfilled, or filled only temporarily by staff with inappropriate qualifications. This has a negative impact on the quality of care. In Denmark, for instance, almost three in four municipalities have experienced a shortage of skilled workers in the elderly care sector.[175] In Finland and Norway, nurses (and associated professionals) were at the top of the list of occupations facing the largest recruitment challenges in many municipalities.[176] [177] Three out of four municipalities in Norway say that it is very challenging, or quite challenging, to recruit nurses. Six out of ten say that it is challenging to recruit doctors.[178] The overall supply of human resources in a country, in this case nurses and health care personnel, is one of several potential driving factors in the undersupply seen at local and regional levels. National comparisons indicate that the supply of required skills differs substantially across the Nordic countries." p 5-6 "In addition to recruitment, the retention of personnel in rural areas and SPAs is also a major issue, due to increasing outward migration. Moreover, there are high attrition rates in social care jobs, due to career reorientation, plus a high degree of sick leave relative to other sectors across all of the Nordic countries. Many experienced nurses are considering leaving the care sector due to various workplace-related factors – such as difficult working conditions, temporary contracts and/or the lack of opportunities for professional development. In Finland, for instance, surveys by the Finnish Nurses' Association (in 2017 and 2018) showed that more than one-third of nurses have considered leaving the profession. As regards to education-related challenges, the quality of training for nurses has been frequently criticised as insufficient.[179] [180] Nine out of ten nurses in Norway have experienced the need to increase their competencies in one or more diagnostic areas in which they work.[181] Other challenges include low and decreasing numbers of applicants for educational programmes relevant to meeting the current and future demands of a qualified workforce. These programmes also have relatively high drop-out rates. In broad terms, all the factors described above, which influence the resilience of the workforce providing social care services, are illustrated in Figure 6." p 7 "The most common intervention measures are aimed at increasing the quality of initial education, continuous education and training, improving working conditions, increasing the attractiveness of the workplace, and enhancing the general prestige of social care jobs (see Table 1). In recent years, Denmark, for example, has placed emphasis on reducing the drop-out rates from education by improving internships and ensuring a smooth transition between theory and practice. In elderly care, Sweden has prioritised digitalisation, promoting full-time work, and raising skills levels. In Finland, the focus has been on attracting more students to education and promoting the recruitment of labour from abroad. Norway and Iceland have worked at modernising their study plans for health and social care

[171] Tillväxtverket (2020) Landsbygders kompetensförsörjning – redovisning till regeringen. Dnr Ä 2019-1134. Tillväxtverket. Available at: https://tillvaxtverket.se/download/18.49b236d2171587c7e4289153/1587109622096/Redovisning%20till%20regeringen%20om%20landsbygders-%20kompetensf%C3%B6rs%C3%B6rjning_200414.pdf.
[172] KEVA (2020). Available at: https://www.keva.fi/globalassets/2-tiedostot/tama-on-keva--tiedostot/kunta-alan-ja-valtion-elakoitymisennuste-2020-2039.pdf (accessed 26 January 2021).
[173] SKR (2020) Möt välfärdens kompetensutmaning - SKR Recruitment Report 2020. Available at: https://rapporter.skr.se/mot-valfardens-kompetensutmaning.html (accessed 14 December 2020).
[174] Tillväxtverket (2020) Landsbygders kompetensförsörjning – redovisning till regeringen. Dnr Ä 2019-1134. Tillväxtverket. Available at: https://tillvaxtverket.se/download/18.49b236d2171587c7e4289153/1587109622096/Redovisning%20till%20regeringen%20om%20landsbygders-%20kompetensf%C3%B6rs%C3%B6rjning_200414.pdf.
[175] Ministry of Health (2018) Kommissorium: Kortlægning af rekrutteringsudfordringer for social- og sundhedspersonale og sygeplejersker i kommuner og regioner. Available at: https://www.sum.dk/Aktuelt/Nyheder/Sundhedspersonale/2018/Juni/~/media/Filer%20-%20dokumenter/Kommissoriet-for-kortlaegning-sundhed/Kommiss-Kortlaegning-afrekrutteringsudfordringer-for-social-og-sund.pdf (accessed 20/12/20).

[176] KS (2019) Kommunesektorens arbeidsgivermonitor 2019 - The Norwegian Association of Local and Regional Authorities. Available at: https://www.ks.no/globalassets/arbeidsgivermonitoren/KS-arbeidsgivermonitor2019-F36.pdf (accessed 15/01/21).
[177] Occupational barometer (2020) An estimate of the employment offices (TE offices) for shortterm outlook for key occupations and workforce availability. Available at: https://www.ammattibarometri.fi/ (accessed 15 December 2020).
[178] KS (2019) Kommunesektorens arbeidsgivermonitor 2019 - The Norwegian Association of Local and Regional Authorities. Available at: https://www.ks.no/globalassets/arbeidsgivermonitoren/KS-arbeidsgivermonitor2019-F36.pdf (accessed 15/01/21).
[179] Kommunal (2018) Utbildningsgapet - Vi behöver fler yrkesutbildade inom vård och omsorg. Available at: https://www.kommunal.se/sites/default/files/utbildningsgapet.pdf (accessed 7 October 2020).
[180] Tehylehti (2017) Blogi: Sairaanhoitajien koulutus kriisissä. Available at: https://www.tehylehti.fi/fi/blogit/mainio/sairaanhoitajien-koulutus-kriisissa (accessed 21 December 2020).
[181] Menon Economics (2018) Bemanning, kompetanse og kvalitet status for de kommunale helse- ogomsorgstjenestene. Menon-publikasjon nr. 51. Available at: https://www.menon.no/wp-content/uploads/2018-51-Status-for-de-kommunale-helse-og-omsorgstjenstene.pdf (accessed 15 January 2021).

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	education, with much more emphasis on improving clinical practice and enhancing internship models." p 7-8

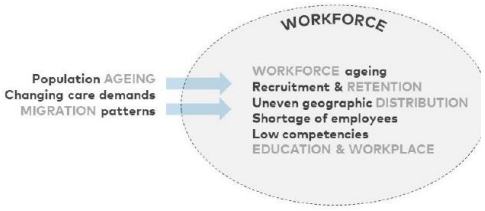

Figure 6. Factors shaping the resilience of the health and social care workforce. Adopted fr the European Commission (2015).[2]

Educational measures	Workplace measures	Other
Increasing the number of available educational places; increasing the quality of education; reducing the duration of training; improving internships and reducing drop-out rates; distance learning; subsidising initial education and continuous training.	Improving working conditions; flexibility in the distribution of nursing tasks, plus task-shifting; professional development; full-time and permanent employment; reducing sick leave; digital technologies to improve efficiency and workplace satisfaction.	Regulatory changes (e.g. a 0.7 per patient minimum staffing requirement at nursing homes in Finland, i order to improve the quali of care); recruitment of permanent staff from abroad.

Table 1. Examples of the recruitment and retention measures employed across the Nordic countries.

Monitoring the needs of the workforce	Recruitment and retention within education	The transition from education to work	Worker mobility (to rural areas)	Continuous education and re-training	Workpla measure
Skills matching Indicators (SE)	Menn i helse (NO)	Internship supervisors in the Region of Southern Denmark	ALIS vest and nord (NO)	A refresher course for nurses (FI)	Quality agenda in Esbjerg Municipali (DK)
Regional STAR offices (DK)	Distance learning programme in nursing at the University of Akureyri (IS)	Simulation centres (IS)	Recruit and retain (NO/ SE)	Nursing as a second university education (IS)	Skills-base recruitme in Region Zealand (DK)
	Reduced training duration (FI)		Common housing for healthcare professionals (NO)	Äldreom-sorgslyft (SE)	Heltidsres (SE)
			Rotational agreements (GL)	Yrkesresan (SE)	Senior Pol (DK)
			Foreign labour mobility (FI)		
			Flexible work arrangement enabled by telemedical and digital tools (IS)		

Table 2. Examples of projects aimed at different stages of the skills supply cycle.

"**Policy recommendations**

- All of the Nordic countries have ageing populations, which implies significant challenges for the health care and social care sectors, especially in rural areas and SPAs, where ageing is more accentuated. All Nordic countries have also experienced challenges regarding recruitment and retention of staff for providing social care services. It is important to monitor workforce needs continuously, and in a systematic way, and to consult and use valid statistics. Good examples here include regional matching indicators in Sweden, and the assessment of the recruitment situation carried out by the regional STAR offices in Denmark. In addition, it is crucial to perform evaluations of recruitment and retention interventions and their long-term effects in order to identify measures that are proven to be effective.
- Effective strategies for addressing recruitment and retention challenges include measures targeted at different areas: recruitment to education, enabling a smooth transition to a first job, encouraging labour mobility to rural areas, providing continuous education, and ensuring workplace satisfaction. Consult the existing examples in this policy brief for examples of inspiration.
- The SPAs in Nordic countries have many similarities, which means they could benefit from an increased Nordic cooperation, including sharing of knowledge and good practice exchange, especially in the field of welfare management and organisation.
- Despite the drastic effects of the COVID-19, responding to the pandemic has also triggered Nordic actors to think in new ways when it comes to delivery of social care services. It is important to remember that crises also present opportunities – there is both a need to collate information about what we need to continue with even after the pandemic, but also to use these stories as a source of inspiration and show how work can be done in the future." p 13

Productivity Commission (2017), Inquiry Report No 84 Shifting the Dial: 5 Year Productivity	"At the heart of Australia's VET system is the objective of ensuring that employers can hire employees who are work-ready. VET plays a key role in providing training for nationally recognised qualifications in job-related and technical skills.[182] [183] As simple as that objective appears, realising it is not straightforward given the demands placed on the VET sector. Not only does the system need to provide broad ranging job-related training relevant to employers, it

[182] NCVER (National Centre for Vocational Education and Training) 2007, *Did you know? A guide to vocational education and training in Australia.*
[183] NSW Department of Industry (2016). *Vocational Education and Training,* Training Services NSW, www.training.nsw.gov.au/vet/index. html

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Review. Australian Government, Canberra	must do so for a wide variety of students with very different needs. It is expected to be a place where young people leaving school can pursue non-academic pathways, where workers can retrain and gain new skills to keep pace with a changing economy, and where people marginalised by the traditional education system can get a second chance.[184] Despite its important but complex role, the VET sector has been beset with a raft of problems leading to a sector characterised by rapidly rising student debt, high student non-completion rates, poor labour market outcomes for some students, unscrupulous and fraudulent behaviour on the part of some training providers. These outcomes reflect a range of problems in the VET sector." p 92-93
Sparrow R (2016). Robots in Aged Care: A dystopian future? AI and Society, 31:445-454	"Imagine that you are visiting my university, Monash University, for the first time. You are in a taxi, travelling through the light-industrial area in which Monash is located when you notice a long white building sandwiched between two factories. There are no windows on this building and from the outside it is hard to tell whether it is a warehouse, a factory, or a factory farm—although the cluster of antenna sprouting from the roof suggest that whatever it is, it involves the transmission of large amounts of data. Careful observation would reveal that this building is visited daily by several trucks and small vans; the absence of any windows in these vehicles gives away the fact that these are autonomous vehicles, the commercial descendants of ''Google car''. You are curious enough to stop the taxi and get out and approach the building, the doors of which open silently as you do so. Stepping inside, you realise that it is an aged care facility for individuals with limited mobility. There are no windows because each resident's room features a number of window-sized televisions displaying, for the most part, scenes from some of the most spectacular parks and gardens around the world. You do notice, however, that several residents appear to have set these screen so that they show what they would have seen if they did have windows. What is most striking about the facility, though, is that apart from the residents there is no one there. The building is fully automated, staffed only by robots. Robot sweepers, polishers, and vacuum cleaners clean the floors. Residents are turned and lifted out of bed by the beds themselves, which can perform these actions either as a result of voice prompts from the resident, remote instructions, or pre-programmed schedules. Sophisticated wheelchairs with autonomous navigation capabilities move the residents around the facility, to the dining hall where prepackaged meals are delivered to tables by serving robots, and to the showers, where something that looks like a cross between an octopus and a car wash bathes them carefully. Again, you observe that some residents control the wheelchairs using a joystick or voice commands, while others appear to be moved around at the initiative of the chairs themselves. In the midst of all this robotic bustle, two robots in particular stand out: the telemedicine robot, which allows medical personnel situated in a call centre in India to diagnose conditions, prescribe and administer medications, and perform simple operations; and, the telepresence robot, which allows relatives to talk with and ''visit'' their parents and grandparents without leaving the comfort of their own homes. One might expect that this building would be silent or disturbed only by the buzzing of the robotic vacuum cleaners. In fact, it is filled with conversation and laughter as the residents talk to their robot companions, which have been programmed to entertain and converse with them in a never ending, if sometimes repetitive, stream of conversational gambits and chitchat. The residents—especially those whose medical records show they have dementia—seem happy. So effective are this facility's operations that—apart from those it ''cares'' for—you are the first person to set foot in it for five years." p 446 "I have begun with this vignette for four reasons. First, although it is science fiction, I am also convinced that it is dystopian science fiction: it describes a situation that we should try to avoid rather than one to which we should aspire. Moreover, as I will argue further below, this may remain true even if residents cared for by robots are happier than they would be if they were cared for by human beings. Second, I want to explore why this is the case. I will suggest that paying attention to the objective elements of welfare rather than to people's happiness reveals the central importance of respect and recognition to the practice of aged care and that the introduction of robots into an aged care setting will often threaten rather than enhance these goods. Third—and perhaps most controversially—I want to argue that the introduction of robots into the aged care setting is likely to transform aged care in accordance with a trajectory of development that leads towards this dystopian future even when this is not the intention of the engineers working to develop robots for aged care. Finally, I want to suggest that even when technology use is autonomous, as it is in at least some cases in the scenario I have described, it may nevertheless remain problematic because of the ways in which technology embodies and establishes power relations between different groups of citizens and thus threatens respect for older citizens." p 446-7 "People at all stages of human life require human contact, both social interaction and physical touch, for their psychological—and physical—well-being, and so it is exceedingly unlikely that people would flourish if cared for solely by robots. Nevertheless, it's possible—although still, I think, unlikely—that some individuals, for instance, committed misanthropes or those with dementia severe enough that they are unable to distinguish robots from human carers, would be happy being cared for entirely by robots. Thus, in order to address the strongest possible case for the benefits of aged care robotics, I have outlined a scenario in which people are indeed happy in the care of

[184] Oliver D & Yu S (2015, Sept 22). 'Australia's VET system needs fundamental change – here's how it can be fixed', The Conversation,

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	robots. Indeed, I want to concede the possibility that the residents of this facility are, in a non-trivial—if controversial—sense, happier than they would be if they were cared for by human beings in an alternative contemporary facility, where staff shortages and low wages mean that human staff are often stressed and sometimes curt or rude." p 447 "Recognition and respect are important components of human welfare because, as Aristotle[185] (as well as many others) emphasised, human beings are fundamentally social animals. No human being can survive into adolescence—or flourish in adulthood—without a community. The nature of our psychology is such that lack of human contact perverts us, even where it is deliberately sought out. Social relations enter into our very thoughts because the language we use is developed and nourished by a community. Our relation to that community and to its members is therefore central to our well-being. Deprivation of recognition, in particular, may have dramatic impacts on a person's subjective well-being and on their psychological and physical health. Lack of respect may be similarly corrosive but also involves the denial of a person's moral worth regardless of whether or not they become aware of it." p 448 "People in the aged care facility I have described are deprived of both recognition and respect by virtue of being looked after entirely by robots and for that reason their welfare is jeopardised even if they are themselves unconscious of this fact.[186]" p 448 "It is worth observing at this point that if a robot is meeting a real need in an aged care context then it is meeting a need that could also be—whether or not it actually is being—met by a human being. The possibility that robots might replace human beings in this context therefore necessarily emerges from the project of developing robots for aged care.[187] Thus, the key question is whether such robots will in fact be used to substitute for human carers or to supplement the care human beings can provide without reducing the number of human beings involved in caring for older citizens[188]. Again, this is not a question about the capacities of robots but about the economics of their future use, if any." p 450 "The decision to use a new technology—and, in particular, to bring it into the home and use it daily—is not an insignificant matter; it has all sorts of ramifications, many of which may only become obvious in retrospect and some of which may remain obscure even then. Philosophy and sociology of technology tell us that tools are not neutral. By foregrounding some possibilities for action and concealing or reducing others, they shape the ends of users[189] [190]. Nor are the effects of technology confined to those who use them; technology also places people in new relations with each other. Some of these new relations are obvious, as when one comes to rely on the staff on the IT support desk answering their phones in order to be able to use one's computer. Others are more subtle, as when people who are not on Facebook miss out on invitations from their friends or those who are not on Twitter have a different sense of the ''events of the day'' to those around them. By placing people in new relationships, technology alters the power relations between people[191]. Indeed, one of these new relationships is precisely the fact that the choices that the designers make regarding the design of technologies are now shaping the users' ends and their relationships with other people. All of which is to say that technology establishes a political relation between designers and users. Thus, when considering the impact of robotics on the extent to which the ends of those being cared for are acknowledged to have equal weight to those of other citizens, it is not sufficient to ask whether the decision to use a particular device is autonomous: it is also important to think about who is designing robots and how the interests of end-users are represented in the device and what role they have played in its design." p 452
State Training Board (2022). State Training Plan 2023-24. Government of Western Australia	"Western Australia has entered into a 12 month Interim Funding Agreement with the Commonwealth Government, which launched the FREE IN '23 – 18,800 fee free TAFE and VET places from 1 January 2023. The course list for fee free places includes qualifications and skill sets across sectors including care, technology/digital, construction, agriculture, hospitality/tourism, and other priority areas for Western Australia such as meat processing, logistics, maritime and mining. The care sector is a particular focus for the interim agreement, with specific aged care targets for fee free training." p 9

[185] Aristotle (2004) The politics (E. Barker, Trans.). Oxford University Press, Oxford

[186] This is not to say that older persons are always treated with respect and recognition by human ''carers''. However, where human beings don't provide these goods, this is widely acknowledged to represent a moral failing. As I discuss below, the claim that the use of robots in aged care is inimical to respect is more controversial than the claim about recognition and I defend it further in the last part of this paper.

[187] This is, perhaps, not so immediately obvious in the case of telepresence robots, which might be thought of as offering a new medium through which contact between people may occur. However,
even in this case such robots clearly function to substitute for the physical presence of the other person.

[188] Parks JA (2010) Lifting the burden of women's care work: should robots replace the ''human touch''? Hypatia 25(1):100–120

[189] Heidegger M (1993) The question concerning technology. In: Basic writings (Rev. and expanded ed). Harper, San Francisco

[190] Winner L (1986) The whale and the reactor: a search for limits in an age of high technology. University of Chicago Press, Chicago

[191] Winner L (1986) The whale and the reactor: a search for limits in an age of high technology. University of Chicago Press, Chicago

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Treasury,(2023). Intergenerational Report 2023: Australia's future to 2063. Australian Government, Canberra	"Growing the workforce and building skills: Responsive skills and training systems and a well targeted migration program can help ensure Australia is well positioned for future structural changes. The Employment White Paper will provide a roadmap for Australia to ensure our education, training, migration and labour market systems support a productive workforce, boost living standards and expand labour market opportunities. The Government is reinvigorating foundation skills programs and improving access to tertiary education, including establishing a Universities Accord, putting in place more fee-free TAFE places and establishing a National Skills Agreement. The Government is also working on future reforms to the migration system to ensure it is well targeted, serves the national interest, and complements the skills and capabilities of Australian workers." p xvi "The care and support sector – including health, aged and disability care – is expected to continue to grow, driven by population ageing, new health technologies and treatments, a maturing National Disability Insurance Scheme (NDIS) and other factors. Meeting the demand for care will require ongoing investment and improvements in delivery." p 4 "Continued strong growth in the care and support sector is reflected in expectations of employment growth. For example, Jobs and Skills Australia projects the number of health care and social assistance workers to grow by 15.8 per cent from 2021 to 2026.[192] The former National Skills Commission also projected that the demand for care and support workers is expected to double by 2050.[193] The care and support sector will create new and meaningful jobs over the coming decades. The policy challenge is to meet increased demand while ensuring the sustainable delivery of quality care. Funding and securing the necessary workforce will require a significant investment and productivity improvements will be critical. Improvement could come from better preventive health outcomes, data and digital technology advances, productive allocation of the health workforce and reducing barriers for entering and staying in the health workforce." p 6 "The size of the workforce relative to the dependent population will also fall as the population ages. Chapter 3 looks in more detail at the impact of population ageing on the labour force participation rate. It considers how increasing employment opportunities for people from historically underrepresented groups, women, and older Australians who may wish to work more may help offset the effects of ageing on labour force participation." p 7 "Demand for care and support services is expected to rise over the next 40 years as the population ages, particularly the growing population of over 85-year-olds. Currently, people aged 65 or older currently account for around 40 per cent of total Australian health expenditure, despite being about 16 per cent of the population.[194] Governments have expanded access to formal care arrangements for children, the aged and people with disability. Standards of care and support have also improved with the shift to consumer-centric models of service provision, stronger regulations, and better pay and conditions for workers. A care and support workforce twice the size it was in 2020–21 could be needed to meet demand in 2049–50.[195] This presents strong future job opportunities, but is a workforce planning challenge. Appropriate skills and training pathways, plus wages that reflect the value of care work appropriately, will be critical to encourage workers to join and stay in the care and support sector." p 8 "Trends in labour force participation over the next 40 years will also reflect changes in the type of work people do and how they do it. Technological change will require an increasingly skilled and adaptable workforce. These jobs have typically been in the services sector, which has grown significantly as a share of the economy over the past century and continues to grow (Chapter 1).[196]" p 74 "Looking forward, the modern labour market will continue to demand skills that are complementary to existing and new technologies. Proficiency in digital skills is already required in many occupations and will grow in importance as new technologies evolve and become commonplace.[197] References to a range of emerging technologies in Australian job advertisements almost doubled between 2012 and 2020.[198] However, frontier technologies such as machine learning and artificial intelligence remain less prevalent than in the United States. Existing foundational skills, such as communication, problem solving and teamwork, are also increasingly valued in the labour market and needed by firms to capitalise on new technologies.[199] [200] More generally, skills that can be transferred between occupations will

[192] Jobs and Skills Australia (Commonwealth of Australia), 'Health Care and Social Assistance,' (n.d) https://labourmarketinsights.gov.au/industries/industry-details?industryCode=Q, accessed 9 August 2023.
[193] National Skills Commission, *Care Workforce Labour Market Study.*
[194] Australian Institute of Health and Welfare (AIHW), 'Disease expenditure in Australia 2019–20' *AIHW* (2022), https://www.aihw.gov.au/reports/health-welfare-expenditure/disease-expenditure-in-australia-2019-20/contents/about, accessed 6 July 2023.
[195] National Skills Commission (Commonwealth of Australia) *Care Workforce Labour Market Study* (Canberra: 2022), 10.
[196] Quinn, M., 'Keeping pace with technological change: the role of capabilities and dynamism', *Speech to the OECD Global Forum on Productivity* (Sydney, 20 June 2019), https://treasury.gov.au/speech/s2019-390085, accessed 4 Aug. 2023.
[197] Productivity Commission, 'Advancing Prosperity: 5-year Productivity Inquiry Report,'
[198] Department of the Prime Minister and Cabinet (Commonwealth of Australia), *Economic impact of care and support* (2023), https://www.pmc.gov.au/resources/draft-national-strategy-care-and-support-economy/economic-impact-care-support, accessed 16 July 2023.
[199] Australian Bureau of Statistics (ABS), 'Australian System of National Accounts 2021–22, Table 5,' *ABS* (28 Oct. 2022) https://www.abs.gov.au/statistics/economy/national-accounts/australian-system- national-accounts/latest-release, accessed 16/07/23

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	be particularly important to help workers navigate a changing industry mix (Chapter 1). As these changes take place, continued focus will be needed on ensuring the benefits are shared equally. Workforce needs will continue to change in profound ways. Structural forces including population ageing, rising demand for care and support services, technological and digital transformation, and climate change and the net zero transformation will shape labour force needs over the next 40 years.[201] Policy will play an important role in helping people, businesses and communities adapt and prosper in the face of ongoing changes to the nature of work. This includes supporting adaptable and high-functioning skills, training and education systems, including foundational skills and lifelong learning, promoting geographic mobility, and responsive and well-targeted migration." p 76 "To enable a more skilled and productive workforce, the Australian Government is reinvigorating foundation skills programs and improving access to tertiary education, including putting in place more fee-free TAFE places, establishing a Universities Accord and a new National Skills Agreement. The Employment White Paper, to be released later in 2023, will provide a roadmap to ensure our education, training, migration and labour market systems support all Australians in achieving their full potential." p 90 "A growing and older population is the primary driver of aged care spending over the next 40 years. It accounts for around 70 per cent of the projected increase in real spending on aged care per person. Additional future demand for aged care will require funding approaches that support a fair and equitable aged care system." p 159 "The key driver of Australian Government aged care spending is the number of people aged over 80. This age group is the major user of aged care services. The number of people aged 80 and over is expected to triple over the next 40 years, to more than 3.5 million people by 2062–63. This will exert considerable pressure on aged care spending. Other factors that can impact future government aged care spending include: • changes in the average cost of providing care, for example price or wage changes • incidence of frailty, disease and disability within the population of care recipients • changes in government policy, including the level and composition of subsidised services, regulatory settings, and the share of cost across governments and households, and • changing preferences of older Australians, including ageing in the home rather than in residential care. The projections of aged care spending are a function of the average real cost per person for a given time of care. For a given age cohort, the real cost is assumed to increase in line with non-demographic growth reflecting quality improvements, increasing frailty and wage pressures, counterbalanced by productivity improvements in the sector." p 159 "Employment in occupations requiring the highest level of skills (bachelor's degree or higher) has increased from 15 per cent of total employment in the mid-1960s to above 30 per cent in 2023. In addition, Jobs and Skills Australia projects that more than half of new jobs will require the highest level of skills by 2026, and a further 40 per cent of new jobs will require a VET qualification (Certificate II through to Advanced Diploma). A more skilled and educated workforce boosts human capital which can benefit the economy by leading to productivity improvements. Because of this, it is also likely to increase demand for investment in education and training over time." p 183
Treasury (2023). Working Future: The Australian Government's White Paper on Jobs and Opportunities. Australian Government, Canberra	"Rising demand for care and support services: Employment in the care and support sector is projected to double over the next four decades, as demand for quality services continues to grow. This is being driven by Australia's ageing population and improved access to formal care arrangements, including for early childhood education and people living with disability, and Australians using more care services as their incomes grow. At the same time, care work has shifted from informal to formal care.[202] Rising demand for care and support services is expected to underpin a continued shift in the industry composition of Australia's economy towards services. This will increase demand for additional workers with the right skills, in vocational and highly specialised roles. Governments play a significant role in funding, delivering and regulating these care and support services, which increases the importance of good policy design to enable productivity growth, quality improvements, appropriate competition and better labour market outcomes." p 2-3 "The care and support economy has grown considerably in recent decades and is projected to grow further. The 2023 Intergenerational Report projects the care and support sector could grow from around 8 per cent of GDP today to around 15 per cent in 2062–63, while the care and support workforce could double over the next 40 years, after

[200] ABS, 'Labour Force Australia, Detailed, May 2023, Table 4' *ABS* (27 July 2023), https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour force-australia-detailed/latest-release, accessed 16 July 2023.
[201] Treasury (Commonwealth of Australia), *2023–24 Women's Budget Statement*, (Canberra: 2023), 11.
[202] Formal care refers to paid care services in the market. Informal care refers to unpaid care provided by family, close relatives, friends, and neighbours.

Document	Relevant Key Points
	having doubled over the past 20 years. Projections produced by Victoria University for Jobs and Skills Australia (JSA) show that the care and support economy is expected to grow by 22 per cent by 2033.[203]" p 6-7 "The increase in demand across the care and support, net zero and digital industries is projected to outpace population growth. Delivering on these specific industry priorities, as well as other objectives such as improving the complexity and diversity of Australia's exports and building on areas of traditional strength, will place significant demands on Australia's skills system, workforce utilisation and broader workplace planning capabilities. Businesses, workers and all levels of government will need to coordinate investments in priority skills to realise Australia's economic and broader industry objectives." p 7 "Wage growth has picked up over the past year to be at its highest level in a decade. This has been driven by competition for workers in a tight labour market and the Government's advocacy to the Fair Work Commission to provide a pay rise for aged care workers and the largest ever increase in minimum and award wages. The Government allocated $11.3 billion to fund the Fair Work Commission's interim increase of 15 per cent to award wages for many aged care workers in the 2023–24 Budget. Real wage growth is forecast to be positive from 2023–24, as inflationary pressures are expected to continue to subside and wage growth remains strong.[204]" p 52 "Although gender segregation is not unique to Australia, it is a major barrier to addressing Australia's skills shortages in critical occupations such as aged care, early childhood education and care, teaching, and technicians and trade workers. Gender segregation restricts the talent pool for businesses to draw from and may impede future productivity growth in the care and support economy, technology workforce and clean energy sector. To narrow the gender pay gap, greater gender balance needs to be achieved in every industry and occupation. This would involve increasing the share of men working in health care and social assistance, and education and training, and of women working in construction, mining, manufacturing, information services, transport, and wholesale services. It would also involve a better gender balance across occupations, with more women in leadership positions from executive manager through to CEO, and more men in community and personal service roles." p 63-64 "Women's disproportionate performance of unpaid care not only contributes to lower workforce participation, but also influences career decisions. After having children, women tend to choose occupations and employers that offer more flexibility or shorter commutes to accommodate caring responsibilities, even when these are lower paid.[205]" p 64 "Productivity gains from better-quality care and support services: The growth in the care and support economy, including its workforce, will make improving productivity in this sector more important for national productivity growth. However, achieving productivity gains in the services sector, particularly in non-market services such as care and support, has been difficult historically. Innovative approaches and technology that change models of care can improve both patient outcomes and productivity. These technological opportunities take many forms. They include reducing the time carers need to spend on administrative tasks, allowing them to focus on the irreplaceable human aspect of care work. Technology can also increase choice and access to care and support such as facilitating in-home aged care and online consultations for those that prefer this form of care. Further, it can widen access to care and monitoring for people living in regional and remote Australia, while not compromising on fair wages and high-quality care. Productivity improvements in the care and support services sector can also be driven by increased adoption of innovative work practices. Innovation can take the form of better models of care and support, and best practice processes and techniques. For example, coordination and integration of primary care services can improve health outcomes and reduce costs by preventing unnecessary hospitalisations. Regulatory settings in the care and support sector are vital for ensuring quality of care and efficient administration of these standards can improve opportunities for innovation and quality service delivery. Increasing the quality of care and support services is also likely to be a key source of productivity growth in the future. Improved mixes of staff, qualifications and skills offer the opportunity to deliver better outcomes for patients. However, delivering productivity gains through improved life outcomes and quality aren't easily measured." p 80 "The mix of skills required in the labour force is changing as Australia's economy evolves. This reflects the changing nature of work. An adaptable and more highly skilled and educated workforce will be required to meet the challenges and the opportunities of an uncertain future. Workers are likely to change occupations 2.4 times on average over the next two decades.[206] It is also likely there will be more growth in jobs that need higher-level skills, which means

[203] The care and support economy is calculated by JSA based on 19 occupations in six industries, spanning early childhood education and care, residential aged care and disability and other care. The 2023 Intergenerational Report uses the ABS definition of the Health Care and Social Assistance Industry Division.
[204] Commonwealth of Australia, Budget Paper No. 1, May 2023, page 6.
[205] Petrongolo B & Ronchi M (2020). '*Gender gaps and the structure of local labor markets'.* Labour Economics.
[206] AlphaBeta, *Future Skills Report*, (2018), https://accesspartnership.com/wp-content/uploads/2023/03/google-skills-report.pdf, accessed 19 September 2023.

Document	Relevant Key Points
	workers will require higher levels of post-school education and training.[207] Projections produced by Victoria University for Jobs and Skills Australia (JSA) show that over the next ten years, more than nine out of ten new jobs expected to be created will require post-secondary qualifications.[208] Around 44 per cent of jobs will require a vocational education and training (VET) qualification, and around half (48 per cent) will require a bachelor's degree or higher qualification. In the current labour market, as of May 2023, around 51 per cent of jobs require a VET qualification, while 35 per cent require a bachelor's degree or higher.[209] The future labour market will demand ongoing rebalancing of the types of skills delivered across the tertiary sector. An adaptable workforce means workers have both a strong core skillset relevant to all jobs and a well-developed set of specialist skills applicable to emerging work needs. A changing industry mix will demand different specific skills. For example, the net zero transformation will see new industries emerge and grow, while the rising demand for care and support services will drive expansion of the health care and social assistance industry. To upskill for the fast-paced evolution of roles and the changing industry mix, workers need an adaptable skills system which is responsive to demand." p 98 "Tertiary education needs to deliver the skilled workers for the jobs of the future: High-quality and responsive education and training systems are pivotal to creating a resilient workforce. Businesses need workers with occupational expertise and strong employability skills who can adapt and shift across tasks as required. To support businesses, the education system must equip people with the capabilities and skills necessary to respond to changes in the labour market. Many of these skills are initially developed in early childhood and developed further through school years, as discussed in Chapters 4 and 6. In addition to supporting people to develop these core occupational and employability skills, the education system needs to provide the further technical and specialist skills for participation in the future labour market. The following factors will be beneficial: • effective – but not overly prescriptive – forecasts • a tertiary system responsive to these needs • better aligning participation in education and training with skills needs." p 99 "Despite the difficulty of accurately forecasting detailed labour market shifts, there are broad trends that can be identified and there are ways to predict the specific skill sets needed. This is particularly important for beginning the process of educating people in more technical areas that will be in demand. For example, the Department of Employment's projections over the five years to November 2019 accurately forecast that the largest employment growth would come from the health care and social assistance industry, even though the size of the shift was underestimated.7 National Skills Commission (now JSA) projections to November 2026 (Chart 5.1) show similar expected growth. It is reasonable to expect continued employment growth in the health care and social assistance industry given the ageing population and rising demand for quality care and support services. It is also reasonable to expect increased use of digital and advanced technologies and the net zero transformation creating large demand for workers. Demand can be predicted with enough confidence to guide planning by businesses, tertiary education institutions and people making education and training decisions. The defence industry is another example where future workforce needs can be predicted with some degree of confidence" p 99-100

[207] National Skills Commission (Commonwealth of Australia), *The state of Australia's skills 2021: now and into the future*, (December 2021), https://www.nationalskillscommission.gov.au/reports/state-of-australia-skills-2021, accessed 4 September 2023.
[208] Victoria University, *Projections for Jobs and Skills Australia*, (2023).
[209] National Skills Commission (Commonwealth of Australia), *Employment Projections, (2022)*, https://www.nationalskillscommission.gov.au/topics/employment-projections, accessed 19 September 2023.

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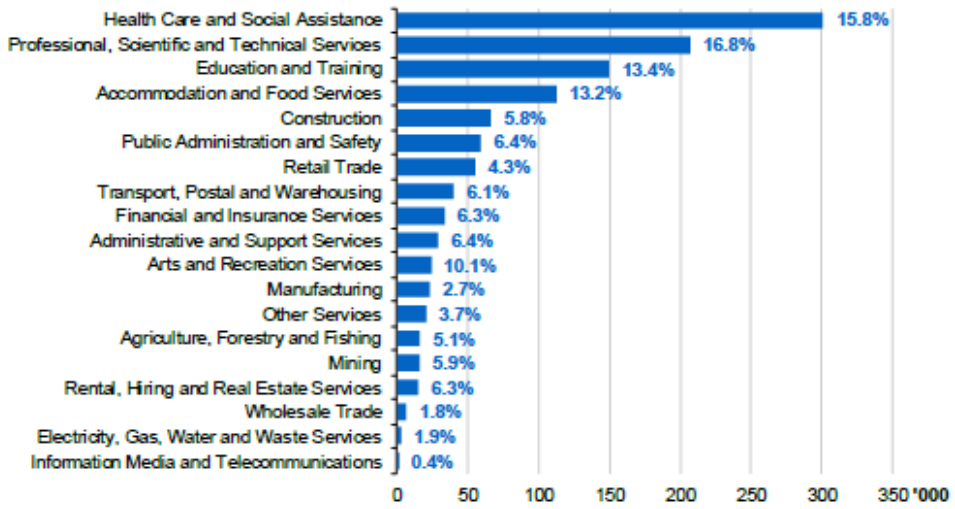
	Chart 5.1 Projected employment growth by industry, November 2021 to November 2026  Source: National Skills Commission, 2021 Employment Projections. Note: Bars refer to projected change in employment (thousands). Percentages refer to the percentage growth for each industry. "Vocational education and training: The VET system is a major pathway to deliver the future workforce. To prepare for the significant forces of the rising demand for quality care and support services, increased use of digital and advanced technologies and the net zero transformation, a more coordinated approach to the VET system by government and industry is needed. This includes making sure that students are presented with tertiary education choices that raise awareness of the career opportunities provided by VET pathways. VET and higher education must be presented as options with different but equally rewarding career paths to secure, fairly paid jobs. States and territories have responsibility for VET delivery, which means training offerings are significantly supported by the states and can vary across the nation. The Australian Government also provides funding to support VET. Better national coordination on VET skills is underway, and shared system stewardship supported by a stronger evidence base through the five-year National Skills Agreement currently under negotiation, will lift the quality and relevance of teaching, increase the supply of workers for priority skills areas and improve student employment prospects. A major challenge to meeting skills needs is lifting course completion rates, especially for priority cohorts. For students who commenced a VET qualification in 2018, the completion rate for all students was 47.6 per cent. For students with disability, it was 41.8 per cent and for remote students 40.7 per cent. Completion rates for Aboriginal and Torres Strait Islander students were even lower at 34.5 per cent.10 A dedicated and collaborative national effort is required to trial new approaches to support these priority groups and make sure more people benefit from a tertiary education." p 101 "Higher education: While Australia has a quality higher education system, it will need to become increasingly responsive to meet the needs of a changing economy. To ensure graduates are equipped with the most relevant and up-to-date skills, higher education will also need to increase collaboration with industry and business. Evidence highlights the effectiveness of combining formal learning with work-related experience for improving student outcomes.[210] Greater use of work-integrated learning will support this goal as well as improving higher education teaching. A more student-focused approach is needed to ensure students get the full benefit of their education and have the skills they need to enter the labour force. This includes supporting students to make good choices about their education so they can make the best of future opportunities. Relative prices have not always provided an effective incentive for students to choose one degree over another. The Job-ready Graduates (JRG) package is one example of an ineffective student incentive scheme in higher education. Early evidence suggests the JRG package has had little to no impact on students' degree selection.[211] While student contributions for society and culture degrees

[210] Jackson et al (2015). *Working together to achieve better work integrated learning outcomes: Improving productivity through better employer involvement*, (November 2015), https://acen.edu.au/wp-content/uploads/2016/06/Working-together-to-achieve-better-WIL-outcomes.pdf, accessed 19 September 2023.
[211] Productivity Commission (Commonwealth of Australia), *5-year Productivity Inquiry: From learning to growth*, (2023); Norton A, *The first Job-ready Graduates university applications data*, (October 2021), https://andrewnorton.net.au/2021/10/25/the-first-job-ready-graduates-university-applications-data/, accessed 19 September 2023.

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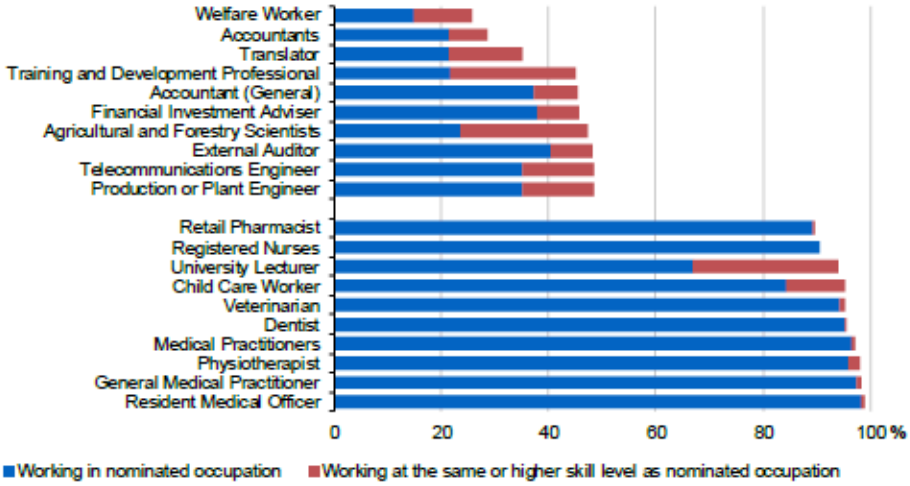
	more than doubled, applications to admissions centres for these degrees increased by 3.1 per cent in 2021, and direct university applications increased by 63.2 per cent.[212] The JRG package failed to recognise that student interest is one of the major drivers of course selection.[213] While it is difficult to convince students to take courses outside their area of interest, students can be influenced towards different courses within their areas of interest.[214] The 'publicity effect' can impact course selection, through positive or negative media or promotion of future employment prospects.[215] For example, marketing campaigns in the United States and United Kingdom which promote teaching as a career have proved effective.[216] Given that students' career choices are heavily shaped by parents and those around them, marketing campaigns can influence both the student and those who advise them.[217] Up-front payments to support work and study can also incentivise course choice. For example, bursaries or scholarships have been shown to be an effective incentive for high-achieving school-leavers and mid-career professionals to choose a teaching career.[218] These methods offer alternative approaches to using course fees as an instrument for shaping student choice." p 102 "By complementing domestic skills and training pathways, migration can play a role in addressing short-term skills shortages and bringing new expertise to Australia. To maximise the benefits of skilled migration, we need to select the migrants who can best contribute to lifting long-term prosperity while ensuring that they can effectively match into jobs they have the skills for. In both of these areas, Australia can do better. Temporary migrants are concentrated in the lower-skilled portion of the labour market. This is because two of the largest uncapped temporary migration visas are Working Holiday Makers and Students. Together with the Pacific Australia Labour Mobility (PALM) scheme, this skews the industries that migrants work in towards those with a higher proportion of jobs that have low barriers to entry and lower skills requirements. As a result, temporary migrants selected on a skills basis make up a small proportion of our temporary migration system. Students and New Zealand citizens, who are not selected on a skill-based criteria, make up about 60 per cent of people holding a temporary visa. Australia only actively shapes a very small proportion of its migrant intake, with the overwhelming majority of migrants arriving in Australia for non-work purposes but then participating in the labour market. This creates tension between the objectives of specific visa classes, for instance balancing student work rights with study requirements. Ensuring Australia becomes the destination of choice for migrants with in-demand skills can be progressed by replacing outdated, inflexible occupation lists that do not meet our skills needs, with an improved new core skills occupation list. Updating Australia's classification of occupations to keep pace with market changes is challenging. It particularly lags new and emerging occupations which are among the most productive and of greatest interest to employers. This leaves gaps when assessing the current and future workforce skills mix. A notable example is the absence of data scientists for many years from the Australian Government's system for classifying occupations – one of the fastest growing occupations in Australia. In the future, constructing a flexible and responsive occupation list offers the opportunity to better reflect the current state of the labour market and identify the skilled migrants that are most needed. There is also scope to better use the skills that migrants bring to Australia. Nearly a quarter of permanent skilled migrants are working in a job beneath their skill level.[219] This could reflect a range of reasons, including challenges navigating licensing systems, completing top-up qualifications, and working through Australian recruitment processes. Discrimination and unconscious bias among employers can also adversely impact migrant employment outcomes.[220] Some occupations exhibit particularly poor results for migrant skills matching. Migrant engineers and accountants stand out among the occupations not matching well into their nominated occupation (Chart 5.2)."p 103

[212] Department of Education (Commonwealth of Australia), *Australian Universities Accord Interim Report*, (2023), https://www.education.gov.au/australian-universities-accord/resources/accord-interim-report, accessed 14 September 2023.
[213] Norton A (2020), *Jobs, interests and student course choices*, (June 2020), https://andrewnorton.net.au/2020/06/21/jobs-interests-and-student-course-choices/, accessed 19 September 2023.
[214] Cherastidtham I, Norton A & Mackey W (2018). *University attrition: what helps and what hinders university completion?*, (Grattan Institute 2018), https://grattan.edu.au/wp-content/uploads/2018/04/University-attrition-background.pdf, accessed 17 September 2023.
[215] Norton A (2020). *Financial influences on job-seeking university applicants*, (June 2020), https://andrewnorton.net.au/2020/06/28/financial-influences-on-job-seeking-university-applicants/, accessed 19 September 2023.
[216] Goss P, Sonnemann J & Nolan J (2019). *Attracting High Achieving Teachers to Teaching*, (Grattan Institute 2019), https://grattan.edu.au/wp-content/uploads/2019/08/921-Attracting-high-achievers-to-teaching.pdf, accessed 25 August 2023.
[217] Department of Education, Skills and Employment (Commonwealth of Australia), *Looking to the future: Report of the Review of senior secondary pathways into work, further education and training*, (June 2020), https://www.education.gov.au/quality-schools-package/resources/looking-future-report-review-senior-secondary-pathways-work-further-education-and-training, accessed 23 August 2023.
[218] Department of the Prime Minister and Cabinet (Commonwealth of Australia), *Incentivising excellence: Attracting high-achieving teaching candidates*, (February 2022), https://behaviouraleconomics.pmc.gov.au/sites/default/files/projects/incentivising-excellence-full-report.pdf, accessed 23 August 2023.
[219] Committee for Economic Development of Australia, 'A good match: Optimising Australia's permanent skilled migration', (2021), https://www.ceda.com.au/Admin/getmedia/150315bf-cceb-4536-862d-1a3054197cd7/CEDA-Migration-report-26-March-2021-final.pdf, accessed 17 August 2023.
[220] Booth A, Leigh A & Varganova E (2021). 'Does ethnic discrimination vary across minority groups? Evidence from a field experiment', *Oxford Bulletin of Economics and Statistics*, (2021), http://andrewleigh.org/pdf/AuditDiscrimination.pdf, accessed 19 September 2023.

Document	Relevant Key Points
	Chart 5.2 Share of permanent migrants working in nominated occupations or at higher skill level nominated occupations with highest and lowest shares  Source: Treasury; Home Affairs Continuous Survey of Australia's Migrants, 2023 to 2021. Note: These values are weighted and include nominated occupations with more than 100 observations over the sample period. "The care and support economy is rapidly growing: The healthcare and social assistance industry is the fastest growing part of the labour market.[221] Over the past 50 years, the demand for care and support services has grown significantly, and this is reflected in the growth in the care workforce (Chart 5.4). In 1966, 2½ per cent of the workforce was in a care occupation. This has increased to ten per cent of the workforce today and this growth is expected to continue.[222] Victoria University projections for JSA show the share of total employment in the health care and social assistance industry will increase from 15.2 per cent in 2023 to 16.7 per cent in 2033.30 This is supported by analysis in the 2023 Intergenerational Report, which projects the care and support sector will almost double as a share of GDP over the next 40 years, increasing from around eight per cent of GDP today to around 15 per cent in 2062–63.[223] Were employment to grow in line with the sector's GDP share, then the workforce will also double over the next 40 years (Chart 5.5).31" p 106

[221] National Skills Commission (Commonwealth of Australia), *Employment Projections*, (2022), https://www.nationalskillscommission.gov.au/topics/employment-projections, accessed 19 September 2023.
[222] Australian Government, 'Budget Paper No. 1: Budget Strategy and Outlook', (Canberra: 2023), https://budget.gov.au/content/documents.htm, accessed 25 May 2023.
[223] The 2023 Intergenerational Report uses a different methodology from JSA to calculate the care and support sector.

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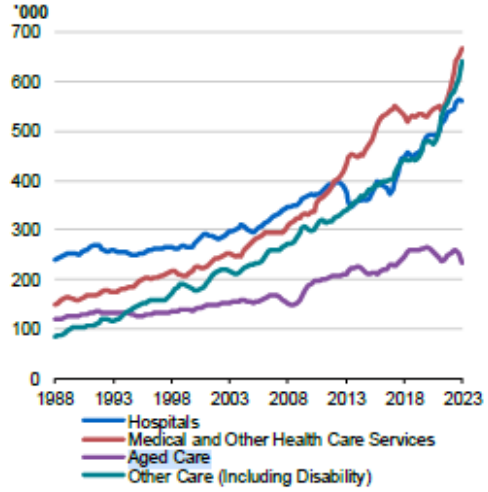
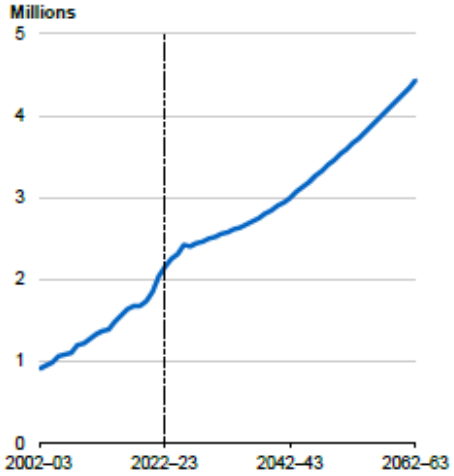
Chart 5.4 Growth in the care and support sector workforce



Source: Treasury; ABS Labour Force, Detailed, Australia, May 2023.

Note: Employment groupings based on the ANZSIC subdivisions for the Health Care and Social Assistance division. Annual moving average applied to quarterly data.

Chart 5.5 Care and support sector employment

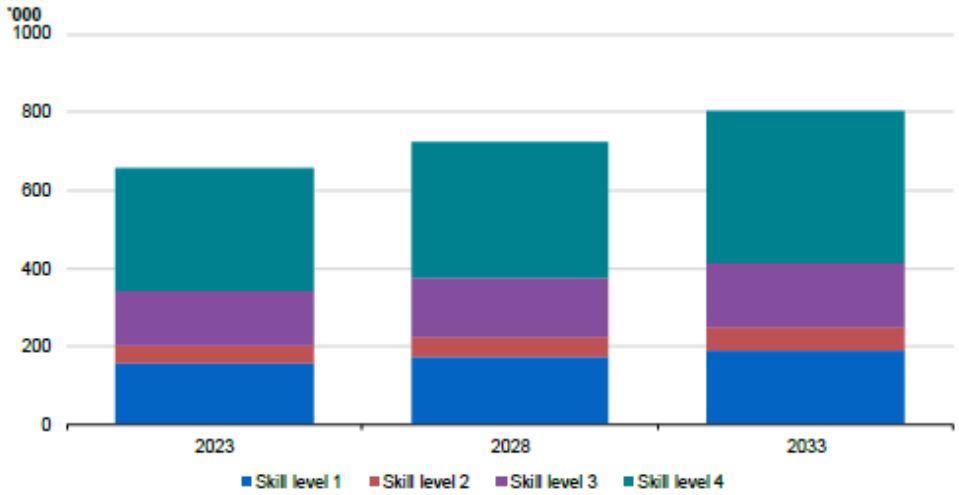


Source: Treasury; ABS Labour Force, Detailed, Australia, May 2023.

Note: Assumptions for modelling are listed in the 2023 Intergenerational Report (IGR).

"Analysis undertaken by JSA shows that the care workforce is broad. In May 2023 there were around 657,200 paid care and support workers employed across 19 occupations and six industries. The care and support workforce spans early childhood education and care, residential aged care and disability and other care.[224] The largest occupation within the care workforce is personal care workers, followed by child carers.[225] The size of the growth of the care workforce over the coming years is therefore likely to be a significant challenge. Over the last five years, growth in the paid care and support workforce has been three times faster than total employment across the economy. Australia's ageing population and increased uptake of formal care services are contributing to increased demand. Analysis based on Victoria University projections indicates that the care and support workforce will grow from around 657,200 workers today to 801,700 workers by 2033. The demand for workers is likely to be higher than this. In particular, strong demand is likely for workers with Skill Level 4 qualifications, commensurate with a Certificate II or III, who already make up half the workforce (Chart 5.6). The significant opportunities for lower-skilled workers will benefit those looking to enter the labour market, re-enter the labour market, or shift sectors. This is because the training required for entry for many roles is likely to be less onerous than other higher skill level occupations. However, there will remain a significant number of higher-skill roles within the care and support sector that will need trained workers. This will require greater collaboration between the higher education and VET sectors, as well as leveraging on-the-job training. Targeted education is needed to support workers to be continuously upskilled throughout their careers. This allows them to adjust to changing care needs but also to allow them to grow their career within the sector and take advantage of the diverse roles and opportunities it offers. The early educators, health and human services JSC, HumanAbility, is working to ensure the needs of the care industry are reflected in qualifications and training packages. To meet this demand, a wide range of actions will need to be taken, including improving attraction and retention in the sector, expanding training opportunities, and investing in technology and new models of care to enable carers to spend more of their time on care. Government has a significant role to play in aligning the training, education and migration systems with this workforce goal, as well as evolving the way it engages in the funding and procurement of care services." p 107-108

[224] JSA analysis of the care and support workforce includes the following occupations: child carers, child care centre managers, early childhood (pre-school) teachers, education aides, welfare support workers, personal care workers (formally classified as aged and disability carers), nursing support and personal care workers, diversional therapists, enrolled and mothercraft nurses, Indigenous health workers, social professionals, registered nurses, nutritional professionals, occupational therapists, physiotherapists, podiatrists, audiologists and speech pathologists, nurse managers and health and welfare service managers.
[225] Victoria University, Projections for Jobs and Skills Australia, (2023).

Document	Relevant Key Points
	Chart 5.6 Projected growth in the care workforce by skill level  Source: Victoria University projections for Jobs and Skills Australia, 2023. Note: Skill Level 1 is commensurate with a Bachelor's degree or higher qualification; Skill Level 2 is commensurate with an Advanced Diploma or Diploma; Skill Level 3 is commensurate with a Certificate IV or III (including at least two years' on-the-job training); Skill Level 4 is commensurate with a Certificate II or III; Skill Level 5 is commensurate with a Certificate I or secondary education. "Improving attraction and retention: The starting point for building the future care workforce is ensuring the jobs are secure and fairly paid. Turnover in the care workforce is high. For example, for personal care workers, 59 per cent spent three years or less in the occupation.[226] Turnover is higher for young people, with 24 per cent of personal care workers aged 44 and under spending just one year in the occupation.[227] This is due to a range of factors, including high workloads, concerns about service quality, pay, work conditions and concerns about career progression opportunities. To address retention issues and encourage workers who have left the sector to re-enter, the care workforce needs to create jobs which offer safe workplaces, secure work and opportunities for a rewarding career. Ensuring pay and conditions reflect the value of care and support work is critical. In May 2018, 95 per cent of care and support workers earned pay rates below the Australian average.[228] [229] Lower pay reflects the gendered undervaluation of work by women in the care and support economy.[230] In the 2022–23 Annual Wage Review decision, the Fair Work Commission (FWC) identified significant issues concerning the potential gendered undervaluation of work in female-dominated industries and occupations. The FWC will undertake work to identify occupations and industries where there is potential pay inequity and gender undervaluation of work to underpin consideration of issues in the 2023–24 Review.[231] In addition, to address lower rates of pay in aged care, in November 2022 the FWC granted a 15 per cent interim wage increase for aged care workers. This decision helps recognise the value of the care sector and helps make it more attractive for future workers. Training to enter care professions needs to be accessible and attractive. Training places should be readily available, especially in regional areas and for in-demand specialities. Further, opportunities need to be available for on-the-job learning and for qualifications to be gained with practical experience. However, before prospective workers even enter the profession, they face financial barriers to participation. Many qualifications in the care workforce require workplace placements or practicums which are unpaid. Additional upfront costs such as transport, child care, and forgoing unpaid work during placements can result in students changing courses or withdrawing from study entirely. Demand for care and support workers has been met overwhelmingly by women. The care and support workforce is highly gender segregated, with women accounting for 76.5 per cent of employment in the health care and social assistance industry. Attracting more men and diverse cohorts into care and support professions will also be important to address shortages in the sector. In

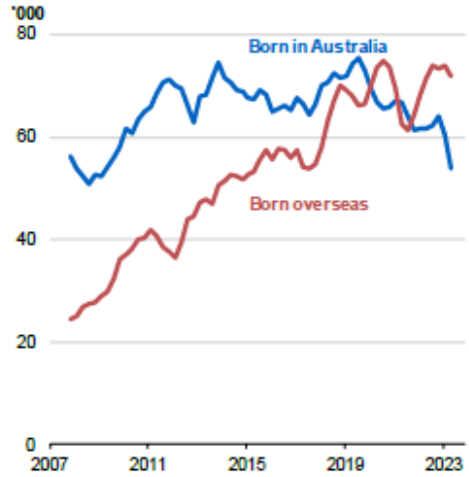
[226] National Skills Commission (Commonwealth of Australia), *Care Workforce Labour Market Study Final Report*, (September 2021), https://www.nationalskillscommission.gov.au/sites/default/files/2022-10/Care%20Workforce%20Labour%20Market%20Study.pdf, accessed 15 August 2023.
[227] National Skills Commission (Commonwealth of Australia), *Care Workforce Labour Market Study Final Report*, (September 2021), https://www.nationalskillscommission.gov.au/sites/default/files/2022-10/Care%20Workforce%20Labour%20Market%20Study.pdf, accessed 15 August 2023.
[228] Note this statistic uses an older definition of the care and support economy used by JSA.
[229] National Skills Commission (Commonwealth of Australia), *Care Workforce Labour Market Study Final Report*, (September 2021), https://www.nationalskillscommission.gov.au/sites/default/files/2022-10/Care%20Workforce%20Labour%20Market%20Study.pdf, accessed 15 August 2023.
[230] World Health Organization, 'Delivered by women, led by men: A gender and equity analysis of the global health and social workforce', *Human Resources for Health Observer Series No. 24*, (2019); The Senate (Commonwealth of Australia), Select Committee on Work and Care Final Report, (2023).
[231] Fair Work Commission (Commonwealth of Australia), 'Decision', Annual Wage Review 2022-23 (C2023/1), (2 June 2023), https://www.fwc.gov.au/documents/resources/2023fwcfb3500.pdf, accessed 19 September 2023.

Document	Relevant Key Points
	addition, the draft National Care and Support Economy Strategy highlights the importance of delivering culturally appropriate care for all people. An increasingly diverse Australian population will require a diverse workforce, as this enhances capability in meeting the varied needs of patients." p 108-109 "Managing regional workforces: Attracting more workers is particularly important to address the growing demand for quality care in the regions. The ageing population in regional areas, combined with thin markets, means tailored solutions need to be developed to meet growing care needs. It will be critical to attract more workers to regional areas, deliver more training in regional locations and enable people who can and want to work more hours in regional areas to do so. There are also opportunities to make more efficient use of existing care and support workers, by allowing them to deliver more multidisciplinary care. In addition, technology-enabled service delivery such as telehealth is an effective way of improving access to healthcare professionals in regional areas. While not the single solution to address delivery gaps, telehealth can support increased access to services such as mental health." p 109 "Using migration to complement the local care workforce: Well-designed migration settings can complement the domestic workforce in the care sector. Migrants make up large portions of the care workforce, especially in aged care (Chart 5.7).[232] Occupations with a higher share of new entrants to the care and support economy who were born overseas include registered nurses in aged care (40 per cent), nurse managers (34 per cent), personal care workers (31 per cent) and nursing support and personal care workers (30 per cent).[233] Overall the health sector is an example of successful permanent skilled migration. A large proportion of migrants working in the health care and social assistance industry are on skilled visas.[234] However, large numbers of migrants in other visa categories also contribute to this workforce, with 19.4 per cent of migrants in the industry on family or New Zealand visas, and eight per cent on student, working holiday, humanitarian or other temporary visas (Chart 5.8). There is scope to improve how we bring migrants into the care sector. Currently, there are significant regulatory barriers to recruiting skilled migrants. Common feedback from internationally qualified health practitioners is that the process is lengthy, burdensome, complex and expensive. For example, the Medical Board of Australia only recognises six competent authorities in five countries, while New Zealand recognises 23, the United Kingdom over 30 and Canada eight.[235] Processes are repetitive and information is difficult to find. Those who wish to work in the Australian healthcare industry must be registered with the relevant health practitioner board. These boards oversee the registration processes for physicians, pharmacists, nurses, midwives, physiotherapists, and other health professionals – independent of the skilled visa assessment process. It can take an international health graduate looking to come to Australia over a year, often longer, to register." p 109-110

[232] Department of the Prime Minister and Cabinet (Commonwealth of Australia), *Draft National Care and Support Economy Strategy 2023*, (2023).
[233] National Skills Commission (Commonwealth of Australia), *Care Workforce Labour Market Study Final Report*, (September 2021), https://www.nationalskillscommission.gov.au/sites/default/files/2022-10/Care%20Workforce%20Labour%20Market%20Study.pdf, accessed 15 August 2023.
[234] Mackey W, Coates B & Sherrell H (2022). *Migrants in the Australian workforce*, (Grattan Institute 2022).
[235] Department of Health and Aged Care (Commonwealth of Australia), *Independent review of health practitioner regulatory settings interim report*, (April 2023).

Document	Relevant Key Points

Chart 5.7 Migrant status of care workers in residential aged care



Source: Treasury analysis of ABS Labour Force, microdata, May 2023.

Note: Four quarter average. In 2021, 85 per cent of residential age care workers born overseas arrived in Australia aged 18 years or older: Treasury analysis of 2021 Census.

Chart 5.8 Share of migrants in health care and social assistance

Source: Mackey, W., Coates, B. & Sherrell, H., *Migrants in the Australian workforce*, (Grattan Institute 2022).

Note: Remaining share arrived before 2000 or were born in Australia. Permanent visa group are those who held a permanent visa between 2000 and 2016. Data on visa group is not available for migrants who arrived before 2000.

"Better using the available workforce: The high prevalence of casual work and multiple job holders in the care sector adds complexity to skills shortages and has implications for delivering quality care. In February 2021, around 28 per cent of the care and support workforce were casual workers, compared with 19 per cent of the total Australian workforce.[236] Aged care, disability support and veterans' care workers are nearly twice as likely as other workers to hold multiple jobs.[237] This can limit job security for some workers who would prefer more stable work and has flow-on impacts for attraction and retention in the sector. Casual work and the prevalence of working multiple jobs can also have an adverse impact on the efficiency with which the care workforce is used, particularly when there are shortages. For example, there are challenges with rostering when there is a mix of part-time permanent and casual staff, often working at multiple care facilities to earn a living wage.[238] Care and support markets have unique drivers and competitive forces, which have significant implications for the care sector labour market. In 2021–22, the National Disability Insurance Scheme had over 500,000 participants and around 325,000 workers.[239] In the aged care sector, the Commonwealth Home Support Program has around 840,000 users and 76,000 staff, home care had over 216,000 users and 80,000 staff, and residential aged care supported around 245,000 residents and over 277,000 total staff.[240] These different parts of the care sector often demand the same skills and can compete for the same workers. To ensure different parts of the care sector can grow together, the Government must be careful to consider the care workforce as a whole when setting policy, to ensure best use of the available workforce." p 110-111

"Improving care delivery models: When care is delivered more efficiently, it expands the service capacity of the available workforce. Improving integration and coordination of primary care services can improve health outcomes and reduce costs by preventing unnecessary hospitalisations. In aged care, effective home care services can be a high productivity approach to delivering care, as living independently for longer can result in lower labour requirements and lower cost than residential aged care, as well as greater benefits to patients. Better integration of technology and use of data in existing care settings also presents an opportunity to improve the quality of care. One example is My

[236] National Skills Commission (Commonwealth of Australia), *Care Workforce Labour Market Study Final Report*, (September 2021), https://www.nationalskillscommission.gov.au/sites/default/files/2022-10/Care%20Workforce%20Labour%20Market%20Study.pdf, accessed 15 August 2023.
[237] National Skills Commission (Commonwealth of Australia), *Care Workforce Labour Market Study Final Report*, (September 2021), https://www.nationalskillscommission.gov.au/sites/default/files/2022-10/Care%20Workforce%20Labour%20Market%20Study.pdf, accessed 15 August 2023.
[238] Royal Commission into Aged Care Quality and Safety (Commonwealth of Australia), *Final Report: Care, Dignity and Respect, Volume 4C*, (2021).
[239] National Disability Insurance Agency (Commonwealth of Australia), *Annual Report 2021-22*, (November 2022); NDIS Review (Commonwealth of Australia), 'Building a more responsive and supportive workforce', (May 2023).
[240] Department of the Prime Minister and Cabinet (Commonwealth of Australia), *Draft National Care and Support Economy Strategy 2023*, (2023); Department of Health and Aged Care (Commonwealth of Australia), *2020 Aged Care Workforce Census*, (September 2021).

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	Health Record, which is a comprehensive data sharing system spanning the whole health and care sector. My Health Record ensures carers have up-to-date and readily accessible information about their clients to deliver more tailored and timely care. By reducing time spent on administrative tasks, technology can free up workers to spend more time with their patients. This improves quality of service, allowing workers to add value where their skills are needed most, especially as 23.8 per cent of occupations in the care and support workforce require a bachelor's degree or above.[241] Training workers to use new technologies will be crucial to help capture quality-enhancing productivity gains. The Government makes significant investments into the care economy, spending over $160 billion on aged care, NDIS and health expenses in 2022–23.[242] The way the Government buys these services has a large impact on access, service quality and choice for consumers, and wages and job quality for workers. The different sectors of the care economy are accessed, funded and regulated separately, with some providers delivering similar services under different regulatory regimes. Opportunities to purchase services in a way which encourages efficiency can help improve overall care delivery models. There are also opportunities to improve the delivery of care through regulatory harmonisation, especially in removing barriers to moving between different parts of the care system. For example, different worker screening arrangements across sectors and states make it difficult for workers to work across different sectors including aged care, disability support and veterans' care.[243]" p 111 "Transport barriers, including long commutes, can also affect women's participation, by making it more difficult to manage care and work responsibilities.[244] In addition, issues with transport disproportionately impact women who are more likely to work in industries such as aged care and disability support services, where issues with transport are significant. This includes the need to have access to their own vehicle to be able to perform care and support roles, particularly in home-based aged care and disability support services." p 149 "Supporting the lowest paid and job security: The Government has taken action to support Australia's lowest paid workers through its submissions to the Fair Work Commission's (FWC) Annual Wage Review (AWR). The 2023 AWR decision to increase the National Minimum Wage by 8.6 per cent and increase Modern Award wages by 5.75 per cent resulted in the largest annual increases in history. The Government has also supported the largest ever increase to award minimum wages, where the FWC provided an interim increase of 15 per cent to award minimum wages for many aged care workers. The Secure Jobs, Better Pay Act amended the Fair Work Act 2009 (Fair Work Act) to add the principles of job security and gender equality in the FWC's decision-making processes. The Secure Jobs, Better Pay amendments to the Fair Work Act also included limits on the use of fixed term contracts for the same role (from 6 December 2023), to improve employees' job security. The Government's reforms to the Fair Work Act have also reinvigorated bargaining. The Government is making the definition of casual employment fairer so the practical reality of the employment relationship is relevant and create a new pathway to permanency for casual employees if they are working like a permanent worker. The Government is also leading by example on job security, preferencing direct employment in aged care and will examine the drivers of insecure work and other aspects of job design and use stewardship levers to incentivise more secure and fairly paid jobs for workers." p 192-193

[241] Victoria University, *Analysis for Jobs and Skills Australia*, (2023).
[242] Australian Government, *Budget Paper No. 1: Budget Strategy and Outlook*, (Canberra: 2023); Department of Social Services (Commonwealth of Australia), 'Budget 2023-24, Portfolio Budget Statement', (May 2023).
[243] Department of the Prime Minister and Cabinet (Commonwealth of Australia), *Draft National Care and Support Economy Strategy 2023*, (2023).
[244] Farré L, Jofre-Monseny J & Torrecillas T (2022). 'Commuting time and the gender gap in labor market participation', *Journal of Economic Geography*, (2022), doi:https://doi.org/10.1093/jeg/lbac037; Grant-Smith D, Osbourne N & Marinelli P (2017). 'Transport and Workplace Accessibility: Routes to improved equity', in Flynn PM, Haynes K & Kilgour MA (2017), *Overcoming Challenges to Gender Equality in the Workplace: Leadership and Innovation*, 107–123, (Greenleaf Publishing in association with GSE Research 2017).

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	3 Planning for our future workforce Table R.3 Actions to plan for our future workforce **Implemented** **Leveraged workforce planning** • Established Jobs and Skills Australia and 10 new, industry-specific tripartite Jobs and Skills Councils • Launched the National Teacher Workforce Action Plan • Established a tripartite Agricultural Workforce Working Group • Instituted a new annual Jobs and Skills Report by Jobs and Skills Australia **Targeted workforce shortages** • Delivered around 215,000 Fee-Free TAFE enrolments with the states and territories in areas of skills shortage • Established an Industry Labour Agreement for Aged Care • Expanded the Australian Apprentice Support Loans to non-trade priority occupations • Invested in workforce skills and training measures for the early childhood education and care sector • Funded an interim 15 per cent pay increase for aged care workers to attract and retain staff in the sector **Underway** **Tailoring industry specific solutions** • Developing a National Strategy for the Care and Support Economy, with an early focus on our regulatory settings • Working towards 1.2 million tech-related jobs by 2030 • Delivering a further 300,000 Fee-Free TAFE places in areas of skills shortage from 2024 • Implementing the APS Digital Traineeship Program • Funding up to 20 nationally competitive PhD scholarships through the Next Generation Quantum Graduates Program • Attracting and training home-grown, job-ready AI specialists through the Next Generation AI Graduates program • Developing a South Australian Defence Industry Workforce and Skills Plan • Reviewing the National Freight and Supply Chain Strategy **Building our labour market evidence base** • Undertaking a National Study of Adult Literacy, Numeracy and Digital Skills • Updating the Australian and New Zealand Standard Classification of Occupations to reflect modern technologies and roles **Future reform directions** **Coordinate skill priorities and policies** • Introduce a single consolidated occupation list for temporary skilled migration • Embed joint stewardship of the VET sector with states and territories to better identify and train students in areas of national priorities • Promote innovation in qualifications and lifelong learning to ensure our ability to meet industry needs **Plan for the care and support economy** • Build capacity and steward the care economy market and workforce as a whole, to deliver quality care and support with quality jobs **Grow our workforce to support the net zero transformation** • Identify skill needs through the Clean Energy Capacity Study • Plan our energy workforce through the National Energy Workforce Strategy **Expand our digital skills base** • Partner with industry to improve pathways into tech careers • Develop targeted strategies for priority areas, including AI, robotics and cyber security "Planning for the care and support economy: Meeting the rising demand for quality care and support services requires a shift in how we view the sector. To build the supply of workers, improve quality and support productivity and sustainability, we need to move from a piecemeal approach to one that values the sector as a whole. This must recognise that currently this sector is highly feminised and low paid. As the care and support economy grows it will have a larger impact on the economy overall. Meeting this demand will require a bigger workforce, equipped with the right skills and tools to support workers to deliver higher quality care. Projected demand across the care and support workforce will increase to around 801,700 workers by 2033, up from around 657,200 workers today.[245] This growth presents significant opportunities for workers to move into the sector and provide the foundations for better care outcomes. To address immediate skills needs, the Government has established a new Aged Care Industry Labour Agreement to help employers bring in migrant workers to meet critical workforce shortages. The Government is also growing our long-term workforce. This includes working with states and territories to prioritise enrolments through the National Skills Agreement, as well as improving pay and conditions to reflect the value of this work. The Government delivered the largest ever pay rise to aged care workers. The Government is investing in a National Worker Registration Scheme, which will help professionalise the aged care sector. The Government is taking action to better understand workforce needs. JSA is developing an early childhood education and care (ECEC) workforce capacity study. This is in addition to investing in the skills and training of more than 80,000 early childhood educators, with a targeted focus on regional and remote services, and Aboriginal and Torres Strait Islander organisations. HumanAbility, the newly established JSC for Early Educators, Health and Human Services, support strengthened career pathways and workforce professionalisation. The Government is also considering how to build a more

[245] Victoria University, Projections for Jobs and Skills Australia, (2023).

Document	Relevant Key Points
	effective ECEC system through the Productivity Commission inquiry into ECEC and the Australian Competition and Consumer Commission's pricing inquiry. Harnessing opportunities in the care and support economy requires considering the sector collectively – recognising that changes in one area such as aged or disability care can have flow-on effects for other areas. The Government will release a National Strategy for the Care and Support Economy to realise the three goals that underpin the Government's vision for sector: quality care and support, quality jobs, and that it is productive and sustainable. The Government is getting the settings right to attract and retain workers, recognising the increasingly professionalised nature of the workforce. Core to building the workforce is supporting quality working conditions and fair wages. The requirement to undertake unpaid practicum placements discourages many students in care and teaching professions from enrolling and completing courses. For example, Diploma of Nursing students must complete a minimum of 400 hours, typically unpaid, in a clinical placement throughout their course (VET sector), Bachelor of Nursing students must complete 800 hours (higher education sector) and Bachelor of Midwifery must complete in excess of 1,000 hours (higher education sector). The Government will undertake scoping work on approaches to mitigate financial hardship placed on tertiary students completing unpaid mandatory practicum placements as part of studies in care and teaching professions. With the growing need in the care and support workforce, and many NDIS participants and carers expressing a preference to do more formal work, a future priority will be considering how to help interested carers and NDIS participants move into the care and support workforce given their skills and lived experience. The Government is also supporting increased quality of care by improving productivity in the sector. For example, streamlined worker screening arrangements can reduce time spent on worker screening checks when employees change their employer or work across sectors. Supporting existing workers to operate at the top of their scope of practice could improve productivity and deliver quality care. Improving productivity extends to ensuring regulation and funding are fit for purpose. This requires better evaluating and understand how the markets are operating. JSA will play a central role in providing independent advice on workforce topics, including the care and support workforce." p 205-207 Actions to support a dynamic and inclusive labour market **1 Strengthening our economic foundations** **Implemented** **Set clear, strategic objectives** • Introduced a new, bolder full employment objective • Made full employment, real wages growth, and women's economic equality core objectives of our Economic and Fiscal Strategy • Added job security and gender equality to the objects of the Fair Work Act **Established a better evidence base for policy development** • Introduced gender responsive budgeting and a national wellbeing framework: Measuring What Matters • Established the Australian Centre for Evaluation • Refreshed the Tax Expenditures and Insights Statement • Released a new Intergenerational Report to guide our understanding of future workforce needs and opportunities • Established a Women's Economic Equality Taskforce to provide advice on priorities for women's economic equality **Supported the lowest paid** • Advocated for pay rises through submissions to Fair Work Commission Annual Wage Reviews • Fully funded the largest ever increase to award minimum wages through aged care work value case • Legislated to expand access to bargaining for small businesses and industries with low levels of bargaining **Underway** **Strengthening economic institutions** • Implementing RBA Review recommendations • Renewing the Productivity Commission • Empowering the Fair Work Commission to set minimum standards for employee-like work • Better coordinating strategic planning across economic institutions, including Jobs and Skills Australia and the new Net Zero Authority • Promoting inclusion by working with new advisory forums, including the Economic Inclusion Advisory Committee • Legislating reforms to close loopholes that undercut wages and conditions, and to criminalise intentional wage theft • Funding the ABS to address priority gaps in labour market data **Improving productivity** • Elevating productivity reform on National Cabinet's agenda • Working across portfolios to realise productivity growth opportunities, including through the Competition Review, Migration Strategy, National Strategy for the Care and Support Economy and a Net Zero 2050 plan **Future reform directions** **Elevate full employment in decision-making** • Embed sustained and inclusive full employment as a strategic objective • Better measure and monitor progress to full employment, especially underemployment and outcomes across cohorts • Address structural sources of underutilisation **Progress a five pillar productivity agenda** • Create a more dynamic and resilient economy • Build a skilled and adaptable workforce • Harness data and digital technologies • Deliver quality care more efficiently • Invest in cheaper, cleaner energy and the net zero transformation **Embed the fundamentals for secure, well-paid jobs** • Promote labour market dynamism, including investigating non-compete agreements • Further address migrant worker exploitation through Migration Strategy initiatives • Improve gender equality and safety in the workplace

Document	Relevant Key Points

2 Modernising industry and regional policy

Implemented

Set national priorities

- Legislated emissions reduction targets of 43 per cent by 2030 and net zero by 2050
- Defined seven national priority areas through the National Reconstruction Fund, ranging from value-add in resources to medical science
- Established the Critical Technologies List, including AI, quantum, robotics, advanced manufacturing, clean energy tech and biotechnology
- Introduced the Regional Investment Framework to ensure investments are delivering for regions
- Established the National Energy Transformation Partnership and National Transformation Principles with states and territories to coordinate the renewable energy and broader net zero transition
- Established the National Cyber Security Coordinator
- Made targeted investments in priority areas, including $100 million equity investment in the Australian Made Battery precinct
- Established Music Australia and Creative Workplaces, and delivered a National Cultural Policy

Underway

Coordinating strategic investment

- Convening investor roundtables to unlock investment in priority areas
- Investing in net zero through initiatives like the Capacity Investment Scheme
- Establishing a Sustainable Finance Strategy to attract green finance
- Rebuilding capabilities through the National Reconstruction Fund and the Industry Growth Program
- Refreshing Australia's National Science and Research Priorities
- Developing strategies for AI and cyber security
- Delivering the Buy Australian Plan
- Supporting Australia's transition to a circular economy by 2030

Investing in modern infrastructure

- $120 billion infrastructure pipeline focused on improving productivity, supply chains and economic growth
- $20 billion Rewiring the Nation to modernise our electricity grid
- $1.1 billion Better Connectivity Plan to boost digital foundations
- $4 billion in Northern Australia Infrastructure Facility
- $1 billion in the Growing Regions and Regional Precincts and Partnerships Program
- Delivering a mission-based approach to innovation through $3.4 billion Defence Advanced Strategic Capabilities Accelerator
- Strengthening biosecurity and disaster resilience systems

Future reform directions

Back people, regions and industries

- Invest in people, their mobility and adaptability
- Invest in places, especially through periods of transition
- Broaden and deepen Australia's industrial base, including through the Critical Minerals Strategy and National Battery Strategy

Become a renewable energy superpower

- Set strong foundations for a net zero economy, including through sectoral decarbonisation plans
- Realise net zero industrial opportunities
- Provide strategic coordination through the Net Zero Authority

Promote tech adoption

- Support businesses to adopt technologies
- Foster an innovative science and technology sector
- Build trust and certainty in technologies, including by developing responsible AI guardrails and cyber security capabilities
- Improve access to digital skills

Document	Relevant Key Points
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Care Package to increase Child Care Subsidy rates for families earning up to $530,000 per annum • Introduced a base entitlement to 36 hours of Child Care Subsidy per fortnight for Aboriginal and Torres Strait Islander children • Developed the Early Childhood Care and Development Policy Partnership to improve outcomes for First Nations children **Increased support for students and the teacher workforce** • Expanded the High Achieving Teachers Program • Reformed NAPLAN to raise the standard and better identify students who need additional support • Launched the National Teacher Workforce Action Plan **Underway** **Making early childhood education and care cheaper, better and more accessible** • Examining child care costs through ACCC inquiry • Identifying opportunities to improve the early childhood education and care sector through a Productivity Commission inquiry • Developing an Early Years Strategy to support early learning, wellbeing and development **Building a better, fairer school system** • Undertaking an Expert Panel Review to Inform a Better and Fairer Education System • Encouraging high-quality candidates to study teaching through scholarships of up to $40,000 each **Boosting adult foundation skills** • Undertaking a National Study of Adult Literacy, Numeracy and Digital Skills • Redesigning and broadening eligibility for the Skills for Education and Employment program • Including foundation skills as a focus area for National Skills Agreement negotiations **Future reform directions** **Chart a course to universal early childhood education and care** • New principles in this Roadmap will guide reforms for establishing universal access to early childhood education and care **Improve equity of school outcomes** • Negotiate new National School Reform Agreement to improve equity and student outcomes • Work with states and territories to have every school on a path to 100 per cent of its fair funding level **Improve access to foundation skills training programs** • Better integrate foundation skills with employment services to help job seekers get the skills they need to improve economic participation outcomes and overcome disadvantage • Establish new coordinated efforts to lift the foundation skills of Australian adults with states and territories
Wang S, Bolling K, Mao	"Technologies, such as internet of things (IoT), Ambient/Active Assisted Living (AAL) robots and other artificial

Document	Relevant Key Points
W, Reichstadt J, Jeste D, Kim H-C & Nebeker C (2019). Technology to Support Aging in Place: Older Adults' Perspectives. Healthcare 2019, 7, 60	intelligence (AI), have been shown to have great potential in fostering independent living, improving mental and physical health, and increasing quality of life.[246] [247] [248] [249] At the same time, they can also reduce caregiver burden, which can lead to more targeted and better quality care.[250] However, despite playing a significant part in successful interventions, adoption of these technologies has been limited.[251] [252] One key barrier to wider adoption has been the "top-down" design process that is often used in creating technology for older adults. This process is based on technologists', or at best geriatricians', preconceptions of the needs of older adults with little consideration of user perspectives and preferences or their real-world constraints." p 2 "It has been recognized that effective technologies are those that prioritize the needs and wishes of older adults, general acceptance of potential users, and suitable preconditions for its adoption,[253] but this is often difficult to achieve with a top-down design methodology that fails to engage users in the design process. This has frequently created significant mismatches between the needs and preferences of the users and the products that are developed to fulfill their needs. Areas of concern for users include visual appearance, functionality, affordability, platform sustainability, privacy concerns, and interaction complexity.[254] [255] [256]These mismatches can hinder meaningful adoption and sustained usage, and risk leaving priority needs of end-users unmet. Employment of user- or human-centered design (HCD) involves the end user in the early planning phases to better understand the needs of individuals for whom a product is being developed and to ensure relevant safety, access, and utility are built in.[257] A design process involving end users can reveal untapped areas for improvement, which can lead to improved user satisfaction and lower adoption barriers, and ultimately to much improved support for individuals who wish to age in place.[258] [259]" p 2 "As the number of older adults increases, the World Health Organization has initiated a movement to establish age-friendly communities.[260] An important component of this initiative should be identifying technologies that support aging in place. Our early stage HCD research sheds light on important issues that are unique to older adults specific to privacy and technology literacy. Engagement of older adults in the design of technologies is often overlooked or an afterthought. Technologies that are commonly used by older adults are often developed without consulting them at the early stage of product conception. This top-down design model means that user input is only received by the product developer after it is completed, making it much harder to alter in order to fit user needs. Our study showed that older adults are experts in their lived experiences and can identify the potential barriers to technology adoption and use. In this study, participants voiced their concerns about technologies they interacted with daily, albeit with varying levels of success, and offered ideas for how to improve these products. One issue was their lack of understanding of fundamental technology concepts. A common barrier to the participatory design process involving older adults is the lack of expertise in product development and programming.[261] Because of this technology literacy gap, there is significant potential value in providing an educational component in the co-design process to overcome

[246] Task Force on Research and Development for Technology to Support Aging Adults. Emerging Technologies to Support an Aging Population; Committee on Technology of the National Science & Technology Council: Washington, DC, USA, 2019.
[247] Mihailidis A, Carmichael B & Boger J (2004). The use of computer vision in an intelligent environment to support aging-in-place, safety, and independence in the home. IEEE Trans. Inf. Technol. Biomed. 2004, 8, 238–247.
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Document	Relevant Key Points
	this issue. While impractical to educate older adults on more complicated topics in computer science and human computer interaction, basic knowledge about current technologies and how they interact with each other would be immensely valuable. For instance, one participant commented that the facility personnel spend a lot of time letting people into their apartments because residents often misplace or forget their keys. An eye scanning or finger print sensor that could be used to unlock the door of the residence, or a system that mimics the proximity-based keyless lock system on modern cars, was suggested by a participant. By gaining a high-level understanding, the resulting ideas and concepts generated by older adults can be more meaningful, particularly in the prototyping stage of the participatory design process, where practical knowledge is needed.[262]" p 12 "This study demonstrates the significant gap that exists between the potential benefits offered by technologies such as AI and other AAI and the barriers that plague older adults in the adoption of these technologies. Education is critical not only for older adults, but also for technologists. While increasing "technology literacy" of older adults can provide meaningful improvements in helping these users interact more successfully with technology, we also must address the need to educate technology creators about older adults—i.e., increasing "aging literacy" of technologists. This education can occur through pragmatic exercises that involve partnering with older adults to design future technologies. Through co-design partnerships, we can create technologies that are useful and capable of reducing barriers at the design phase. Rather than intervening after a product is in the market place, we can preempt the problems introduced by low technology literacy and fundamentalist privacy attitudes. Moreover, feedback loops can be built in that will help older adults to better understand their data and how these data are used to predict their healthcare needs." p 13

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Appendix 2: Living Labs

Living Labs bring together research, design and consulting with the end user to deliver innovation and improved outcomes. An example is Flinders University who is working with the Global Centre for Modern Ageing to deliver a trial living lab.

The trial Advisory Group of 14 members has been established to provide ongoing advice as the trial progresses. Members are from assessment, consumer, service provider and health professional backgrounds.

The Global Centre for Modern Ageing® the partner with Flinders University states that it is, 'proudly independent, and research partner agnostic'. They elaborate "It's about carving out new pathways and co-designing appealing, fit-for-purpose choices that reflect older adults' agency and individualism." Which includes Life Lab - LifeLab® Bringing end user experience research to life. Featuring sophisticated video and audio recording systems to capture end user interactions, our Global Centre for Modern Ageing® LifeLab® was purpose built for innovation. The LifeLab® studio based in South Australia offers a highly customisable, simulated 'real-life' environment. Here, GCMA's skilled researchers work alongside older adults and/organisations to co-design and validate products, services and experiences that will better serve the lives of ageing people in Australia and around the world".

Another example is Swinburne University's Living Lab. Swinburne Living Lab, a program within the Centre for Design Innovation, hosts a European Network accredited Living Lab focused on solutions promoting greater health and wellbeing across the lifespan and in ageing populations. The Living Lab strongly emphasises co-creation, real-life settings, human-centred and emotion-led design to give users a strong voice in the process.

The European Network detailed in the Swinburne's model is the European Network of Living Labs (ENoLL). Its is the international, independent non-profit association of bench-marked living labs with more than 340 accredited living labs worldwide.

Living labs are real-life test and experimentation environments, where users and producers co-create innovations, in a trusted, open ecosystem that enables business and societal innovation. Living labs enable the co-creation of user-driven and human-centric research, development and innovation of technologies, products and services focused on the well-being of people.

They state a living lab employs four main activities:

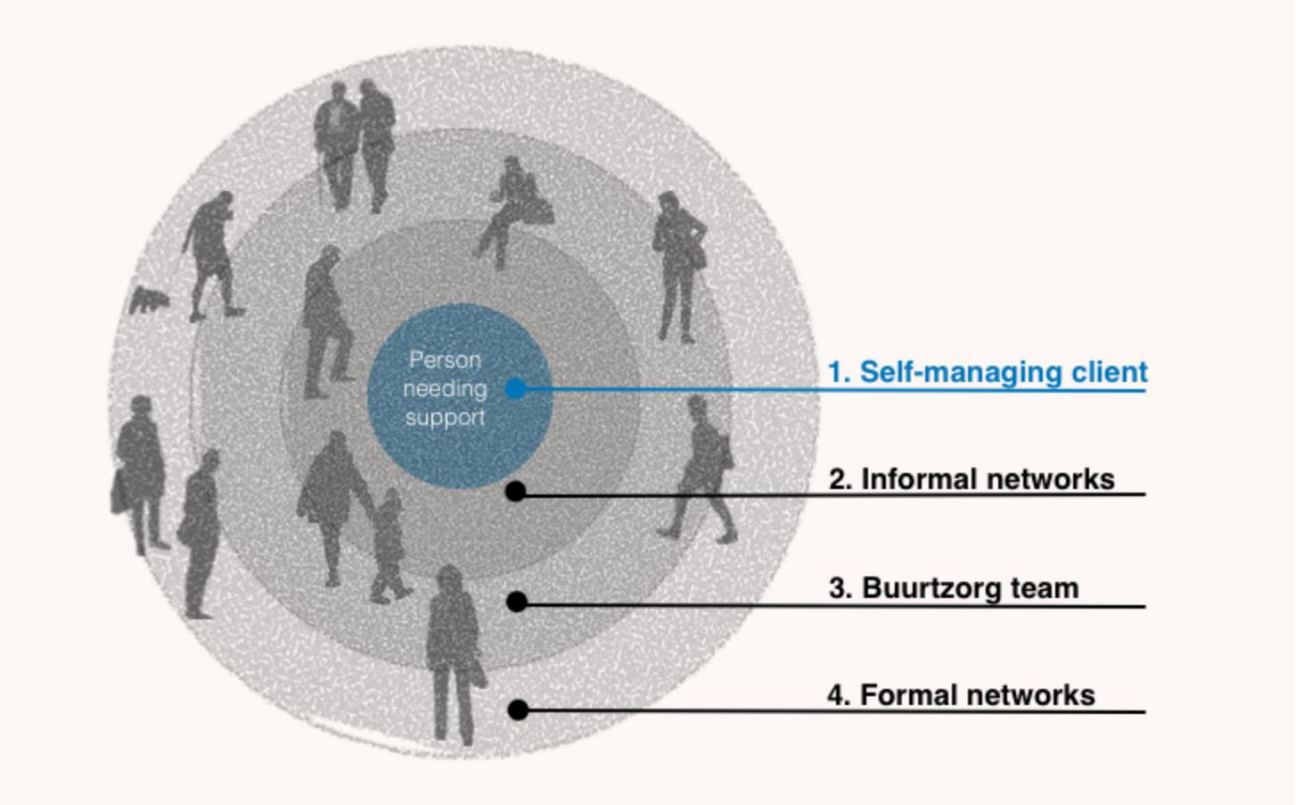
- Co-creation: co-design by users and producers.
- Exploration: discovering emerging usages, behaviours and market opportunities.
- Experimentation: implementing live scenarios within communities of users.
- Evaluation: assessment of concepts, products and services according to socio-ergonomic, socio-cognitive and socio-economic criteria.

Appendix 3: Buurtzorg Model

The Buurtzorg model provides the potential for experimentation and the delivery of community care in ways that may attract and retain younger people and lift the quality of care. This overview taken from the Buurtzorg website[263] provides some insight into the multiple ways a COE might promote alternate approaches that also address the central issue of attracting and retaining the workforce required to meet the needs of an ageing population.

The Buurtzorg Model of Care

The Buurtzorg onion model starts from the client perspective and works outwards to assemble solutions that bring independence and improved quality of life.



Self-managing clients

The onion model assembles the building blocks for independence based on universal human values:

- People want control over their own lives for as long as possible
- People strive to maintain or improve their own quality of life
- People seek social interaction
- People seek 'warm' relationships with others.

The professional attunes to the client and their context, taking into account the living environment, the people around the client, a partner or relative at home, and on into the client's informal network; their friends, family, neighbours and clubs as well as professionals already known to the client in their formal network.

[263] https://www.buurtzorg.com/about-us/buurtzorgmodel/

In this way the professional seeks to build a solution involving the client and their formal and informal networks. Self-management, continuity, building trusting relationships, and building networks in the neighbourhood are all important and logical principles for the teams.

Self-managing teams

Self-managing teams have professional freedom with responsibility. A team of 12 work in a neighbourhood, taking care of people needing support as well managing the team's work. A new team will find its own office in the neighbourhood, spend time introducing themselves to the local community and getting to know GPs and therapists and other professionals. The team decide how they organise the work, share responsibilities and make decisions, through word of mouth and referrals the team build-up a caseload.

Buurtzorg teams are entrepreneurial in spirit, continually improving the organisation and services. All of Buurtzorg innovations come from one person or a team having an idea and the freedom to try something new. For example, Buurtzorg has an annual national Walker-race – started by one team and their clients organising a neighbourhood walker-race – and the idea has now spread across the Buurtzorg community of 10,000 nurses.