



NSW Ministry of Health

Physiotherapy - Horizons Scanning and Scenario Generation

July 2017



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1 Executive Summary

THE PURPOSE OF THIS DOCUMENT IS TO OUTLINE THE METHODOLOGY, APPROACH AND THEMES RAISED BY THE LITERATURE AND PHYSIOTHERAPY STAKEHOLDERS TO INFORM THE WORKFORCE MODELLING PHASE (STAGE C IN FIGURE 1 BELOW) OF THE NSW MINISTRY OF HEALTH'S WORKFORCE PLANNING METHODOLOGY. IT SHOULD BE NOTED THAT THE VIEWS EXPRESSED IN THE REPORT ARE NOT NECESSARILY THOSE OF THE NSW MINISTRY OF HEALTH.

The Physiotherapy Horizons Scanning and Scenario Generation Report is driven by the NSW Health Professionals Workforce Plan 2012-22 (the Plan), which sets out the framework for addressing the workforce implications of increasing demand for health services in NSW. Given this increasing demand for health services, the Plan establishes that simply increasing staffing without considering changing workforce practices and introducing more efficient and effective models of care is unsustainable.

The Plan outlines that the Workforce Planning and Development Branch (WPD) is responsible for developing and modelling projections for the Allied Health workforce over the next five years in line with forecast health service delivery requirements.

In 2014, there were 27,011 registered physiotherapists, 83.0% of whom were employed in the physiotherapy field. Around 92.0% of employed physiotherapists worked in a clinical role and around 83.3% physiotherapists were full time employed per 1,00,000 population (Australian Institute Health and Welfare, 2017).

Physiotherapy services help to assess, diagnose, treat and work with patients to prevent disease and disability through physical rehabilitation. Physiotherapists treat various movement disorders, increase mobility and prevent further injury (Duckett & Breadon, Unlocking skills in hospitals: better jobs, more care, 2014).

Physiotherapists work in settings including hospitals, community health centres, centres for physically disabled people, mental health services, rehabilitation centres, sports clinics and fitness centres, government departments and universities (Health Workforce Australia, 2014).

The Physiotherapy Workforce Horizons Scanning and Scenario Generation Project (the Project) supported stakeholders in the physiotherapy profession to participate in the development of a driver model that articulates key demand and supply drivers for the physiotherapy workforce in NSW.

Demand drivers may be defined as factors that shape and influence demand for a workforce's services. The Project identified several demand drivers for the physiotherapy workforce including population demographics and increasing incidence of complex and chronic disease, government funding and policy, scopes of practice, emerging models of care, service awareness and service coverage and accessibility.

Supply drivers may be defined as factors that contribute to the availability, sustainability and size of the workforce. The Project identified several supply drivers for the physiotherapy workforce including career pathways and professional development, training and availability of placements, workforce recruitment and retention, succession and workforce planning, funding for physiotherapy services and skill mix of the workforce.





The purpose of this document is to outline the methodology, approach and findings of the project to inform the Workforce Modelling phase (Stage C in Figure 1 below) of the NSW Ministry of Health's Workforce Planning Methodology.





2 Introduction

The Physiotherapy Horizons Scanning and Scenario Generation Report is driven by the NSW Health Professionals Workforce Plan 2012-22 (the Plan), which sets out the framework for addressing the workforce implications of increasing demand for health services in NSW. Given this increasing demand for health services, the Plan establishes that simply increasing staffing without considering changing workforce practices and introducing more efficient and effective models of care is financially unsustainable. The Plan outlines that the Workforce Planning and Development Branch (WPD) is responsible for developing and modelling projections for the Allied Health workforce over the next five years in line with forecast health service delivery requirements.

The Horizons Scanning and Scenario Generation project represents an opportunity for stakeholders in the physiotherapy profession to participate in the development of a short, medium and long-term vision for their field. In developing this vision, several system-wide drivers require consideration, including (but not limited to):

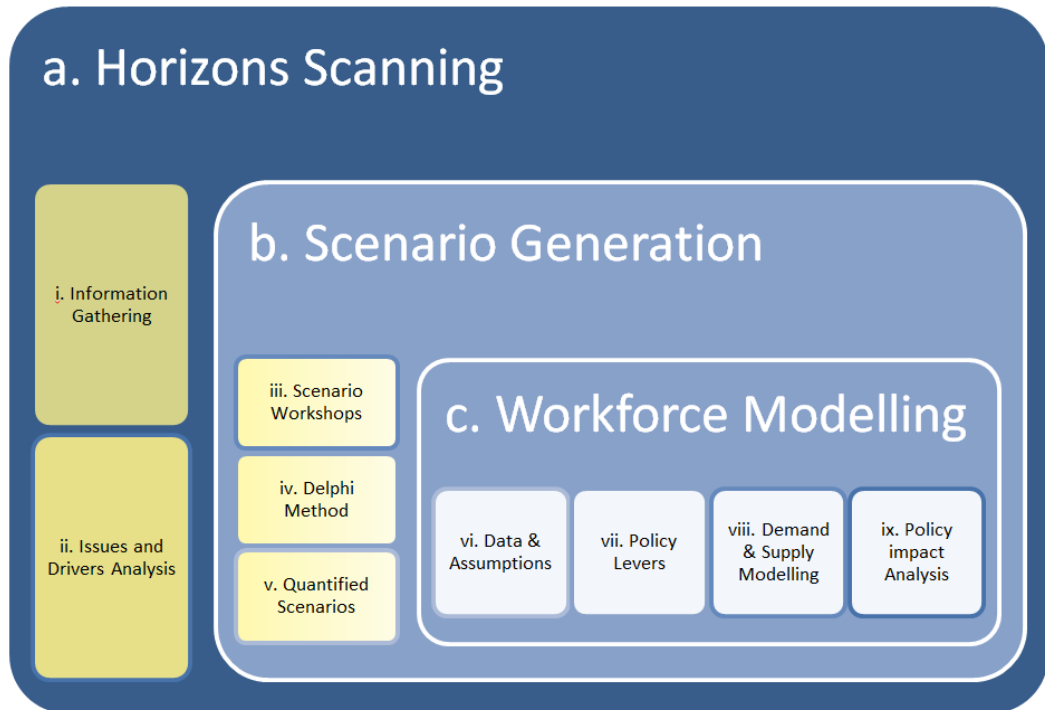
- The need to shift the provision of service from an institutional focus, towards a patient-centric model
- An increasing focus on Activity-Based Funding, encouraging services to consider more efficient models of care, often delivered in the home or in community based settings
- Impacts of Information and Communication Technology (ICT) on physiotherapy roles, how technology supports physiotherapy, it's capabilities and challenges with access, and the overarching state-wide eHealth/NSW ICT strategies
- An emphasis on collaborative, multidisciplinary teams across care settings and balancing health profession specialisation with generalisation to address the increased demand for care, particularly amongst patients with chronic and complex conditions
- A need to consider the geographic distribution of workforce to align with changing population demographics and health needs
- Broader NSW-wide and national programs of work including, for example, the NSW Integrated Care Strategy, NSW Health Leading Better Value Care initiative and the National Disability Insurance Scheme (NDIS).





The Information Gathering, Issues and Drivers Analysis; and Scenario Workshop phase of the Scenario Generation stages as set out in the Ministry of Health workforce planning methodology are represented in Figure 1 below.

Figure 1. Ministry of Health Workforce Planning Methodology



2.1 Methodology

The methodology used to conduct the physiotherapy workforce horizons scanning and scenario generation is comprised of two components – an information gathering phase, and an issue and driver analysis phase.

Different approaches were used in each phase to draw out relevant information as described below.

2.1.1 Literature Search and Review

An initial web search was conducted to gather high level information about the physiotherapy profession from a number of key websites including the NSW Health website, Australian Institute of Health and Welfare Institute and Australian Bureau of Statistics. An overarching search review of the peer-reviewed literature was then undertaken using major databases including CINAHL, PROQUEST and OVID. Literature published outside of New South Wales and Australia were also utilised. A comprehensive search of the relevant grey literature, organisational literature and articles from Google Scholar were undertaken as an additional source of information. Recent publications were prioritised, and available published data were considered in the review. Keywords relevant to physiotherapy services were identified and utilised.





2.1.2 Stakeholder Online Survey

An online survey was designed and distributed to a small number of Local Health District (LHD) and Specialty Health Network (SHN) nominated physiotherapy stakeholders. The survey contained a series of questions relating to workforce demand and supply drivers, in addition to the challenges and opportunities available. The survey questions were informed by the initial findings of the literature review. Stakeholders were required to identify the level of significance of the drivers, challenges and opportunities in addition to prioritising them based on their perceived level of impact.

2.1.3 One-to-one Stakeholder Interviews

A small series of one-to-one interviews were conducted in parallel with the online survey. These interviews provided an opportunity for a deeper dive into what stakeholders perceived to be key workforce drivers, challenges and opportunities. Combined with the online surveys and literature review, the interviews completed the information gathering stage and provided a focused framework for development of the horizons scanning workshops.

2.1.4 Horizons Scanning Workshop

The horizons scanning workshop was conducted on the 18th May 2017 and formed the basis for the issues and driver identification stage of the workforce planning methodology. Key physiotherapy stakeholders representing a total of 15 LHDs in NSW and three SHNs participated in the workshop and as a group identified workforce demand and supply drivers. Other representatives from NSW Universities and the APA were also in attendance.

Validation of the high-level drivers identified in the literature review combined with those raised in the workshop informed the development of a physiotherapy workforce driver model.

2.1.5 Scenario Generation Workshop

The scenario generation workshop was conducted on the 16th June 2017 and built upon themes that were explored in the horizons scanning workshop. To maintain consistency in the methodology, the same horizons scanning workshop participants were engaged.

The workforce driver model was refined to encapsulate the key demand and supply drivers for the physiotherapy workforce. Stakeholders were invited to validate the concepts contained within the physiotherapy workforce driver model. In addition, stakeholders explored a series of future scenarios to determine their plausibility, potential impacts on the workforce and the method by which the workforce aimed to address them.





3 Overview of the Profession

This section of the report details the physiotherapy scope of practice and associated and relevant professional boards and bodies.

3.1 Profession Overview and Scope of Practice

Physiotherapy services help to assess, diagnose, treat and work with patients to prevent disease and disability through physical rehabilitation. Physiotherapists treat various movement disorders, increase mobility and prevent further injury (Duckett & Breadon, Unlocking skills in hospitals: better jobs, more care, 2014).

Physiotherapists work across a variety of settings including hospitals, community health centres, centres for physically disabled people, mental health services, rehabilitation centres, sports clinics and fitness centres, government departments and universities (Health Workforce Australia, 2014).

The key physiotherapy interventions are broad and include (but not limited to):

- Using techniques to strengthen joint mobilisation and stretch muscles and joints to improve patient mobility
- Performing spinal and peripheral joint mobilisation and manipulation
- Using equipment such as heat or ice packs, exercise equipment, ultrasound and electrotherapy to ease pain, reduce swelling and improve movement
- Re-training patients to walk or to use walking frames, splints, crutches or wheelchairs
- Educating patients, their families and the community to prevent injury and disability and to lead healthy lifestyles
- Working in Emergency Departments as primary contact practitioners
- Acute care physiotherapy in the hospital setting – for example cardiopulmonary physiotherapy.





3.2 Professional Boards and Bodies

Table 1 below provides an overview of the five key professional physiotherapy boards and peak bodies across Australia, the role they play and the stakeholders they represent.

Table 1: Physiotherapy Professional Boards and Bodies

Organisation	Role	Representation
Physiotherapy Board of Australia	Regulation and registration	Federal government
Australian Health Practitioner Regulation Agency (AHPRA)	Supports Physiotherapy Board of Australia in Registration and Regulation	National board
The Australian Physiotherapy Council Limited	Accreditation and Assessment	National body
Australian Physiotherapy Association (APA)	Peak body representing Australian Physiotherapists and their patients	National body
Council of Physiotherapy Deans Australia & New Zealand (CPDANZ)	Represents academic profession of physiotherapy in universities in Australia and New Zealand	National body represents the academic profession of physiotherapy in universities in Australia and New Zealand.
The Physiotherapy Council of New South Wales	The Physiotherapy Council has the responsibility to deal with complaints about the conduct, professional performance, health and competence (fitness to practise) of any physiotherapist employed in New South Wales (NSW) and any physiotherapy student.	





3.2.1 Physiotherapy Board of Australia

The Physiotherapy Board of Australia is responsible for registering physiotherapists and developing guidelines for the profession. The functions of the Physiotherapy Board of Australia include (Physiotherapy Board of Australia, AHPRA Physiotherapy Board of Australia, 2017):

- Registering physiotherapists and students
- Developing standards, codes and guidelines for the physiotherapy profession
- Handling notifications, complaints, investigations and disciplinary hearings
- Assessing overseas trained practitioners who wish to practise in Australia
- Approving accreditation standards and accredited courses of study.

3.2.2 Australian Health Practitioner Regulation Agency

The Australian Health Practitioner Regulation Agency (AHPRA) works in partnership with 14 National Health Practitioner Boards to implement the National Registration and Accreditation Scheme, under the Health Practitioner Regulation National Law across Australia. AHPRA supports the functions of Physiotherapy Board of Australia (AHPRA, 2017).

3.2.3 The Australian Physiotherapy Council Limited

The Australian Physiotherapy Council Limited is an independent national body. The activities of the Council include (The Australian Physiotherapy Council Limited, 2017):

- Accreditation of entry-level physiotherapy education programs offered by higher education providers
- Assessment of qualifications and skills of overseas-qualified physiotherapists for registration and migration purposes.
- Provision of advice, recommendations and consulting services to the Physiotherapy Board of Australia and other relevant organisations, in relation to accreditation and assessment
- Maintenance and regular review of the Accreditation Standard.

3.2.4 Australian Physiotherapy Association (APA)

The Australian Physiotherapy Association (APA) is the peak body representing the interests of Australian physiotherapists and their patients. The APA is a national organisation with non-autonomous state and territory branches and speciality subgroups. It has more than 23,000 members and over 300 members in volunteer positions on a committee or working parties. The APA also encourages members to participate in appropriate professional development activities through Continuing Professional Development (CPD) which is a requirement for all members (Australian Physiotherapy Association, Australian Physiotherapy Association, 2017).

3.2.5 Council of Physiotherapy Deans Australia & New Zealand (CPDANZ)

The Council's purpose is to represent the academic profession of physiotherapy in universities in Australia and New Zealand. The Council provides leadership and advice on





policy, operational matters and accreditation relating to entry-level and post-graduate physiotherapy education, research and knowledge transfer (CPDANZ, 2017).

3.2.6 The Physiotherapy Council of New South Wales

The Physiotherapy Council of New South Wales came into existence from 1 July 2010 with the commencement of the National Registration and Accreditation Scheme.

The Physiotherapy Council has the responsibility to deal with complaints about the conduct, professional performance, health and competence (fitness to practise) of any physiotherapist employed in New South Wales (NSW) and any physiotherapy student.

The Council is established and functions in accordance with the Health Practitioner Regulation National Law (NSW) and the Health Practitioner Regulation (New South Wales) Regulation 2016.

In NSW, the Health Care Complaints Commission continues to have an integral role in complaints management as the independent investigator and prosecutor of complaints, and will work in consultation with the Physiotherapy Council on the investigation and management of all complaints.

3.3 Entry to the Profession

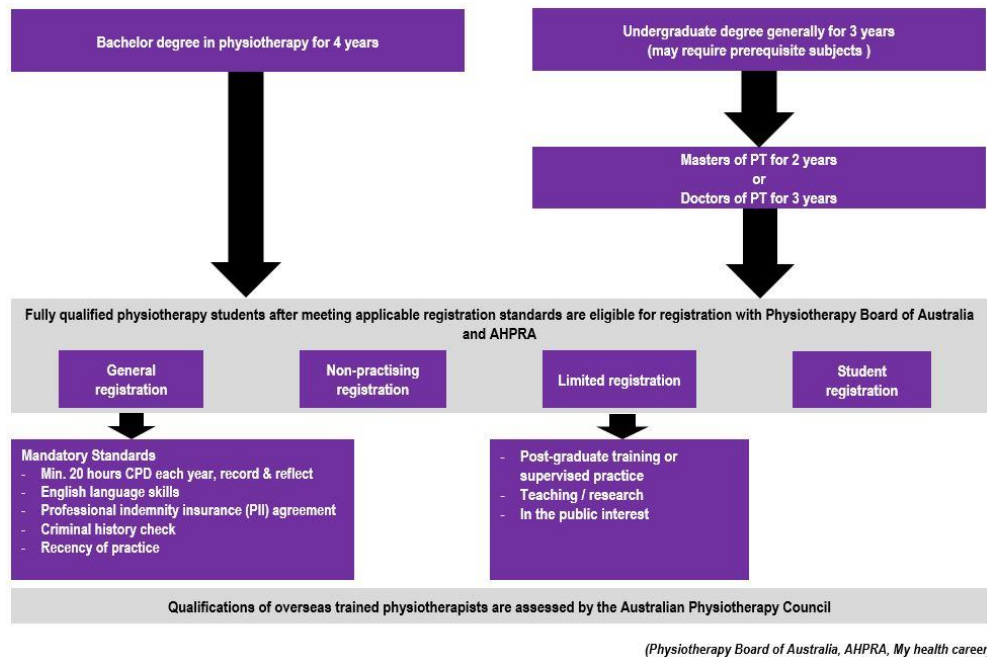
Physiotherapy is a registrable health profession under the National Registration and Accreditation Scheme (NRAS). Fully qualified physiotherapy students require registration through the Physiotherapy Board of Australia after successfully completing an approved degree program. Approved programs of study are included in [Appendix A](#). The accredited program of study can be either a four-year full-time equivalent (FTE) program at Bachelor or Honours level or a two-year FTE program at graduate-entry Masters level (Health Workforce Australia, 2014).

The Australian Health Practitioner Regulation Agency (AHPRA) provides support to the Physiotherapy Board of Australia in degree assessment and registration process. The qualification and skills of overseas trained physiotherapists are assessed by Australian Physiotherapy Council. Each applicant is required to fulfil mandatory standards set by the Physiotherapy Board of Australia to obtain and maintain registration. Figure 2 below depicts the pathways of entry to the profession.





Figure 2: Pathways of Entry to the Physiotherapy Profession



3.4 Workforce Characteristics

The following section of the report represents Australian physiotherapy workforce data with a focus on NSW. The data shows the total number of physiotherapists employed in Australia, type of registration and principal place of practice percentage as well as data related to age and gender distribution in the workforce.

3.4.1 Number of Physiotherapists employed in Australia

In 2014, there were 27,011 registered physiotherapists, 83.0% of whom were employed in the physiotherapy field. Around 92.0% of employed physiotherapists worked in a clinical role and around 83.3% physiotherapists were full time employed per 100,000 population (Australian Institute Health and Welfare, 2017).

Data regarding employed physiotherapists in remote areas was collected from the National Health Workforce Dataset for the year 2011-2012. The number of employed physiotherapists per 100,000 population reduced with increasing remoteness, from 101 employed physiotherapists per 100,000 population in major cities to 28 in very remote areas. Employed physiotherapists in remote and very remote areas had higher average weekly working hours, a younger average age, and lower percentages aged over 55 years than physiotherapists working in the other areas (Australian Institute of Health and Welfare, Allied health workforce 2012, 2013).

3.4.2 Aboriginal Workforce Characteristics

Physiotherapists of Aboriginal and Torres Strait Islander descent accounted for less than one percent of all employed physiotherapists (Australian Institute of Health and Welfare, Allied health workforce 2012, 2013). Over half (56%) of these physiotherapists were aged under 35. As per the Public Service Commission (PSC) workforce profile data, in the year 2016, the number of Aboriginal physiotherapists in NSW Allied Health was 12 as compared



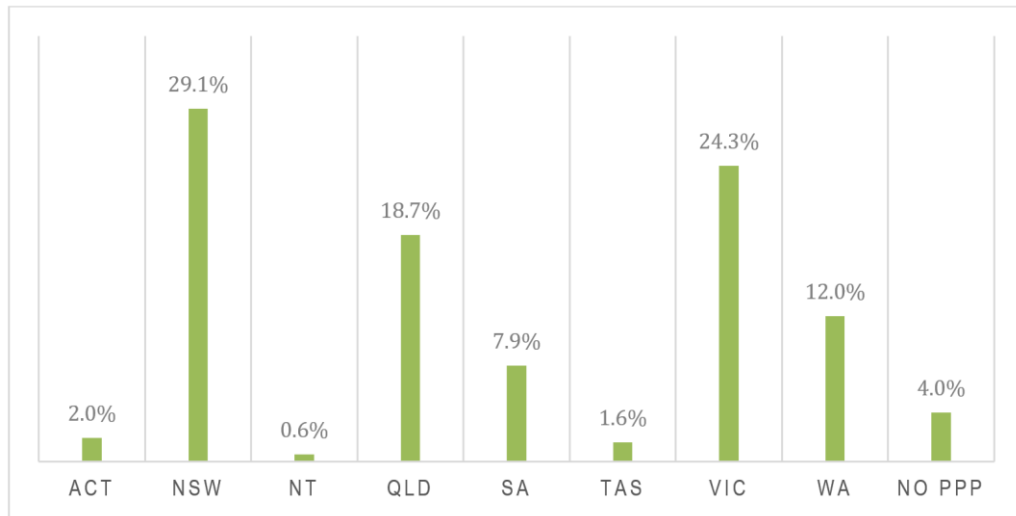


to non-Aboriginal physiotherapists which were around 1890 (NSW Public Service Commission, 2016).

3.4.3 Registered Physiotherapists

As per 2016 data from the Physiotherapy Board of Australia, there are total of 30,004 registered physiotherapists in Australia. Figure 3 below demonstrates that New South Wales has the highest number of registered physiotherapists accounting for 29.05% of the workforce.

Figure 3: Registration Type by Principal Place of Practice



Out of 30,004 registered physiotherapists, around 28,748 are general registrants, 359 are limited registrants, and 897 are non-practising. Table 2 below shows registration type and subtype by principal place of practice (Physiotherapy Board of Australia, Physiotherapy Board of Australia Registrant Data, 2016).

Table 2: Registration Type and Subtype by Principal Place of Practice (PPP)

Registration Type	Registration Sub-type	ACT	NSW	NT	QLD	SA	TAS	VIC	WA	No PPP	Total
General		577	8,384	168	5,425	2,299	458	6,929	3,470	1,038	28,748
Limited	Postgraduate training or supervised practice		67	3	44	22	12	160	34	2	344
	Teaching or research		11		3			1			15
Non-practising		8	255	3	124	42	7	206	80	172	897
Total		585	8,717	174	5,596	2,363	477	7,296	3,584	1,212	30,004

Source: (Physiotherapy Board of Australia, Physiotherapy Board of Australia Registrant Data, 2016)





3.4.4 Gender and Age

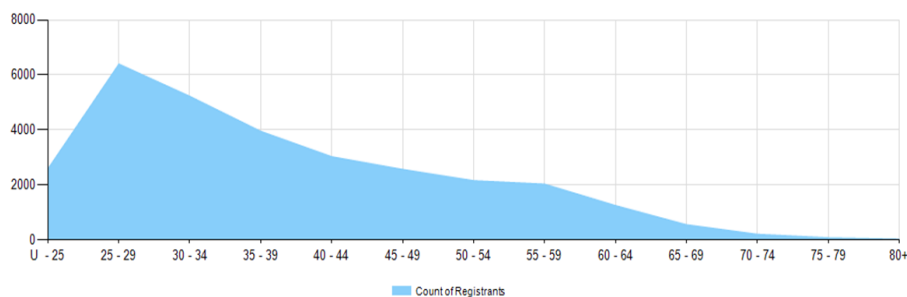
Table 3 below outlines that 67.9% of the Australian physiotherapy workforce is female, and around 32.1% is male (Physiotherapy Board of Australia, Physiotherapy Board of Australia Registrant Data, 2016).

Table 3: Workforce Gender and Age Distribution

Gender	ACT	NSW	NT	QLD	SA	TAS	VIC	WA	No PPP	Total
Female	68.4%	67.5%	73.6%	66.5%	65%	70.9%	68.1%	71.3%	69%	67.9%
Male	31.6%	32.5%	26.4%	33.5%	35%	29.1%	31.9%	28.7%	31%	32.1%

Figure 4 below shows registration by age group. 30.0% of general registrants are under 30 age group whereas only 1.1% of general registrants are over 65 age group (Physiotherapy Board of Australia, Physiotherapy Board of Australia Registrant Data, 2016).

Figure 4: Registration by Age Group



Source: (Physiotherapy Board of Australia, Physiotherapy Board of Australia Registrant Data, 2016)

3.5 Pathways to Access Physiotherapy Services

Most patients access physiotherapy by self-referral or through a medical practitioner. The referral pathways into physiotherapy services are as follows:

- Self-referral
- Referral by a General Practitioner
- Referral by another professional in a multidisciplinary team or specialty
- Referral during inpatient admission
- Referral during triage upon presentation at an emergency department
- Referral by a residential aged care facility.

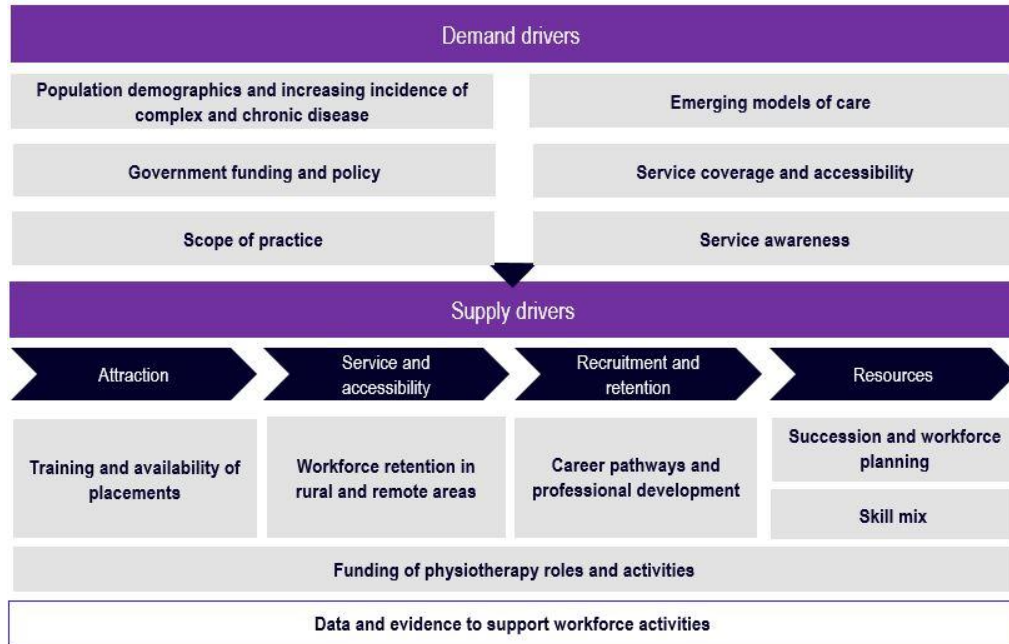




4 Summary of the Key Demand and Supply Drivers

This section provides an overview of the key demand and supply factors impacting the physiotherapy workforce as identified through the literature and consultation with stakeholders. The driver model brings together those demand and supply drivers that have been developed through the horizons scanning and scenario generation process discussed above. These drivers are summarised in Figure 5 below.

Figure 5: Physiotherapy Demand and Supply Driver Model



4.1 Physiotherapy Demand Drivers

This section provides a detailed analysis of the demand drivers currently impacting the physiotherapy workforce. Demand drivers may be defined as factors that shape and influence demand for a workforce's services.

Table 4 below provides a high-level overview of the demand drivers and is followed by a more detailed explanation and analysis of each.





Table 4: Physiotherapy Demand Drivers

Demand Drivers	Description
Population demographics and increasing incidence of complex and chronic disease	Incidence of complex and chronic disease based on population growth, demographic characteristics and geographic distribution. The increasing burden of disease is also a factor, risk factors include poor diet, for example.
Government funding and policy	Scope, focus and access to services as determined by government funding and expenditure on physiotherapy services (e.g. NDIS, My Aged Care)
Scope of practice	Scope of roles performed by physiotherapists and other health professionals
Emerging models of care	Shift to primary and preventative care, patient centric models of care including NSW Integrated Care and Whole of Health
Service awareness	Heightened consumer expectations and awareness of physiotherapy services based on community knowledge and perceptions, and visibility of key programs.
Service coverage and accessibility	Physiotherapy service coverage and consumer accessibility based on geographical distribution and service operating hours

4.1.1 Demographic Factors and Increasing Incidence of Chronic and Complex Disease

One of the greatest challenges for the Australia's health system today is the growth of the ageing population (Australian Institute of Health and Welfare , Australia's Health 2016, 2016). Old age is accompanied by greater use of health services in terms of resources and cost of care (Australian Institute of Health and Welfare , Australia's Health 2016, 2016).

The ageing population will contribute to a higher demand for physiotherapy services across different settings including community and home-based care, palliative care, acute and subacute care. Stakeholders have observed an increase in the demand for physiotherapy services that address health needs such as falls and fracture management which are often associated with the over-65 cohort. As the population ages these types of issues could become even more prevalent, further increasing demand for physiotherapy services.

There is an overall increase in life expectancy due to improved medical care and the ability to treat chronic disease. Along with that, a growing burden of musculoskeletal diseases and disability will lead physiotherapists to play a major role in complex and chronic care.





An ageing population may also mean an increase in the rates of elective orthopaedic surgeries such as total knee / hip replacements due to an increase in conditions such as osteoarthritis. These types of surgery often require rehabilitation support from physiotherapy and therefore could result in a higher demand for physiotherapy services into the future.

Chronic diseases (such as cancer and cardiovascular disease) are accountable for the leading cause of poor health outcomes, death and two-thirds of the burden in Australia (Australian Institute of Health and Welfare , Australia's Health 2016, 2016).

Physiotherapists play a major role in the management of chronic disease care and as co-morbidities rise the physiotherapy workforce will likely play an increasing role in care delivery.

People 60 years of age or older with multiple health conditions require multi-disciplinary care - especially in the hospital setting where physiotherapists contribute to care by using treatments such as mobilisation and manipulation of joints, therapeutic exercise, electrotherapy and hydrotherapy to reduce pain and restore function (Health Workforce Australia, 2014). Stakeholders also agreed that integrated care and multidisciplinary care require increased involvement of physiotherapists.

4.1.2 Government Funding and Policy

In a public health system funding and policy are the key components of the service landscape and therefore a strong influencer on the shape of all clinical workforces.

Hospitals face demands to provide high-quality care, seven days per week, while also minimising the costs of service delivery. Seven-day services have been proven to deliver high quality cost-effective care that improves patient flow through hospitals and reduces adverse incidents such as falls and intensive care admissions (Mitchell, O'Brien, Bardoel, & Haines, Challenges, uncertainties and perceived benefits of providing weekend allied health services- a managers' perspective, 2017). However, for seven-day services to achieve these outcomes all staff resources need to be utilised well. There is evidence that weekend allied health services can improve patient outcomes, for example on rehabilitation wards (Mitchell, O'Brien, Bardoel, & Haines, Challenges, uncertainties and perceived benefits of providing weekend allied health services- a managers' perspective, 2017). If physiotherapy services are incorporated into seven-day models of care in the future this could increase demand for physiotherapy services.

Stakeholders identified funding as one of the top demand drivers for physiotherapy services. Funding models such as activity based funding should be based on patient outcome rather than an individual episode of care. According to some stakeholders, the National Disability Insurance Scheme (NDIS) will increase demand for physiotherapy services in both the private sector and Non-Government Organisation sector. It is important for the physiotherapy profession to promote the value of the services it provides to government policy makers and funders in order to ensure physiotherapy services are adequately funded.

One area of concern identified by physiotherapy stakeholders was the limited coverage of Aged Care Funding Instruments (ACFI) that only include acutely ill and frail elderly streams. This was considered too limited in scope and does not allow for full funding of the range of interventions provided for. This limited scope can cause confusion over which interventions are covered by the instrument and which are not. There are no funding





arrangements for online physiotherapy consultants. It should be noted here that the Department of Health has recently initiated a program of work to update and replace the ACFI model within the next three to four years.

Under the National Health Reform Agreement, the four-hour National Emergency Access Target (NEAT) has been introduced to improve services in Australia's public hospitals (Australian Institute of Health and Welfare, Australian Hospital Statistics: National emergency access and elective surgery targets, 2012). Stakeholders identified that hospitals are under pressure because of emergency department wait time targets and requirements to decrease length of stay. In order to meet targets, patients are often being discharged at a lower level of function and this can create additional demand for physiotherapy services in the community and/or in care settings when patients are readmitted.

It was noted that sometimes hospitals do not link optimally with primary and community services and were seen to operate in silos. This is being addressed through a range of policy initiatives such as the NSW Health Integrated Care strategy. These types of integrated models of care are instrumental in helping to meet quality and cost demands. The involvement of physiotherapists in coordinated and integrated models of care may drive demand for physiotherapy services.

4.1.3 Scope of Practice

The physiotherapy services of the future will provide a more diverse range of services and will address a broader range of health needs. (Australian Physiotherapy Association, InPractice 2025: Final report, 2013). It is anticipated that scopes of practice will evolve into broader domains with an opportunity for physiotherapy to lead services currently undertaken by other professions such as medicine or nursing. In Queensland work is progressing to develop a rural generalist pathway, for example, that will potentially broaden the scope of services that physiotherapists can deliver in rural and remote areas.

Stakeholders agreed that the wider role of physiotherapists in primary health care, multidisciplinary care models and advanced scope of practice will increase demand for services in future. This will have a number of benefits for patients and the broader health system. For instance, if physiotherapists take on a broader scope of practice there may be an opportunity for other specialists to refocus efforts on their area of expertise and/or more complex patients and for more optimal utilisation of the Allied Health Assistant workforce.

4.1.4 Emerging Models of Care

New emerging models of care will impact the way physiotherapy services are provided in NSW and drive workforce demand. An increasing emphasis on preventative management sited in primary care is just one example. Stakeholders noted that conservative and preventative management is more cost effective compared to high-cost acute care. There may be a potential shift of delivery of care from acute to community settings in the future and services delivered in the community will have to be responsive to this demand. The primary focus of health care would be on preventive and primary care. This could broaden the scope of physiotherapy practice and will raise demand for physiotherapists - especially in relation to chronic care and preventive care. This broadening of scope and thus enhanced involvement of physiotherapy in preventative models of care could facilitate improved patient health outcomes.





Another impact of the increased role of physiotherapy identified by stakeholders in primary care and integrated models of care could be that the profession plays a stronger, more integral role in follow-up appointments – for example in fracture clinics in either primary care or an outpatient setting. In this service model physiotherapy is built-in to the package of care provided to the patient, rather than by a referral from medical staff. Within this approach there is also the potential for deployment of more advanced scopes of physiotherapy practice (e.g. physio-led clinics) increasingly complementing the existing medical resource capacity. Stakeholders identified more widespread adoption of this type of enhanced role would again increase the demand for physiotherapy services.

4.1.5 Service Coverage and Accessibility

In line with the overall population distribution in Australia, the majority of physiotherapists are located around the larger urban areas. People living in remote and rural areas often experience poorer or no access to physiotherapy services (Owen & Tracy, 2008). Due to continued inequities in health, Indigenous status and low socio-economic status, refugees, overseas visitors and individuals living in rural and remote areas are considered to be disadvantaged groups. Such disadvantaged groups often have limited access to health services, including physiotherapy.

Physiotherapists can play a crucial role in providing care to disadvantaged groups in the community who are often at risk of poorer health outcomes. Studies have identified the presence of growing need and fundamental challenge in the provision of culturally competent and accessible physiotherapy services to Indigenous people and people living in remote areas (Owen & Tracy, 2008); (Lloyd, Wise, & Weeramanthri, 2008).

4.1.6 Service Awareness

Growing awareness of the types of physiotherapy services which are potentially available was identified by stakeholders as a key driver of demand for physiotherapy. As a result, consumers may have an increased expectation of what they can expect from physiotherapy services including the quality of care, cost effectiveness and engagement in care planning (Australian Physiotherapy Association, InPublic 2025, 2015).

Stakeholders also agreed that there would be a continuing increase in the expectations of patients to receive patient-centred care that is accessible in local areas. Increased awareness among the public of the types of services they are entitled to, and promotion and marketing of the profession could also increase demand.





4.2 Physiotherapy Service Supply Drivers

This section provides a detailed analysis of the supply drivers currently impacting the physiotherapy workforce. Supply drivers may be defined as factors that contribute to the availability, sustainability and size of the workforce.

Table 5 below provides a high-level overview of the supply drivers and is followed by a detailed explanation and analysis of each supply driver.

Table 5: Physiotherapy Supply Drivers

Supply Drivers	Description
Career pathways and professional development	Availability of clear career pathways and continuing professional development
Training and availability of placements	Graduate training opportunities and the availability of work placements to accommodate them
Workforce recruitment and retention	Workforce recruitment and retention. Also, considering geographical location
Succession and workforce planning	Overall human resources planning and identifying challenges within the workforce
Funding of physiotherapy roles and activities	Relates to a variety of funding measures for physiotherapy positions and activities
Skill mix	The combinations of activities or skills needed for the physiotherapy profession to deliver appropriate services to consumers / patients

4.2.1 Career Pathways and Professional Development

An increasing number of mid-career physiotherapists are moving out of clinical practice into other professional disciplines or management roles to advance their careers leaving variable skills gaps in services (Australian Physiotherapy Association, InPublic 2025, 2015). Stakeholders identified limited career development opportunities such as availability of training and support as one of the top supply drivers that affect retention of staff.

Despite increasing physiotherapy service demand, there is a lack of availability of postgraduate programs rurally and the presence of challenges around mobility of the ageing workforce. Stakeholders consider that there are limited leadership role opportunities at the management level. There is also a lack of opportunity for physiotherapists to undertake a mix of both clinical and academic work as well as a mix of





public and private sector work. An increase in this mix of work would potentially enrich the careers of physiotherapists and help to retain them in the workforce.

4.2.2 Availability of Training and Placements

There is strong growth in the number of new graduates across both undergraduate and postgraduate courses. Physiotherapy is a popular choice of career and therefore the introduction of physiotherapy programs at new universities is evident. Physiotherapy graduates are facing specific challenges such as obtaining clinical placements for new graduates, availability of senior staff to supervise their work and limited opportunities in the public sector (Health Workforce Australia, 2014). Aboriginal Community Controlled Health Organisations may also provide training and/or clinical placement opportunities, providing that placement support is available.

Stakeholders agreed on certain issues regarding an increase in university physiotherapy programs and the number of graduates. Despite having enough new graduates, there is a concern relating to the quality of clinical education and availability of clinical placements in the public sector. In rural and remote areas, there are sometimes insufficient numbers of senior physiotherapists available to provide training and supervision to the future workforce. Universities can play a crucial role in developing knowledge and skills of new physiotherapy graduates and can be helpful in filling some of these gaps.

4.2.3 Workforce Recruitment and Retention

Physiotherapy has traditionally been a female-dominated profession constituting 67.9% of the Australian physiotherapy workforce (Physiotherapy Board of Australia, Physiotherapy Board of Australia Registrant Data, 2016). Studies show the effect of demand on services due to women taking more career breaks for family reasons and being more likely to work part-time (Department of Employment SA, 2016) (Pretorius, Karunaratne, & Fehring, 2016).

Stakeholders reported that there is an increasing number of physiotherapists leaving the profession to undertake other careers, for example in medicine. This poses an ongoing challenge to workforce retention.

As with many other professional groups, physiotherapists working in the public sector are highly concentrated around the major metropolitan areas. There is a current shortage of physiotherapy workforce in rural and remote areas. Stakeholders identified that if there are insufficient opportunities for experienced physiotherapists to undertake continuing professional development this may contribute to considerations to leave the profession. Some of the barriers to both rural and remote recruitment and retention in physiotherapy professions include availability of financial incentives, limited support services, limited career pathway opportunities, isolation and lack of locum availability (Australian Physiotherapy Association, The factors affecting the supply of health services and medical professionals in rural areas, 2011).

4.2.4 Succession and Workforce Planning

Stakeholders identified geographical factors as one of the primary drivers that affect the supply of physiotherapists. The quality of service provision in rural areas may be compromised where the number of senior experienced physiotherapists is limited. Also, it may be harder to develop multidisciplinary teams where the skill mix of staff is narrow.





Stakeholders identified it would be beneficial to rotate graduates between both metro and rural/regional areas in order that they gain a broad range of skills and knowledge in different geographic regions when training. This approach has been a challenge in circumstances where metropolitan based graduates are reluctant to move to rural or remote areas. Rural placements are available, but often graduates move back into substantive roles in metropolitan areas once their placements have been completed.

Stakeholders recognised the issues around backfilling positions when staff take annual leave, sick leave or maternity leave. As physiotherapy is a female-dominated profession, an increased rate in maternity leave and part-time work preferences can create gaps/impact on service delivery. This often leads to unfilled staff vacancies due to the challenges associated with filling/recruiting to temporary positions.

4.2.5 Funding of Physiotherapy Roles and Activities

Stakeholders identified funding and allocation of funding is one of the key supply drivers that affect the physiotherapy workforce. Clearly the establishment and funding of physiotherapy positions is a critical supply driver across both primary and secondary spheres of care.

Stakeholders view funding as a rate limiting factor for physiotherapist supply. Groups often cite as an example, occasions when service capacity is expanded (e.g. new beds in a hospital) the physiotherapy establishment remains unchanged. The result being that supply is constricted in relation to the increased demand. This supply scenario however assumes no productivity gain is made in new facilities/services from team-based working, or new technology, or models of care.

In another example, while evidence strongly indicates that seven-day rostering of physiotherapy services can positively impact upon the outcomes for patients (e.g. supporting criteria-led discharge processes over the weekend), the profession is often not consulted regarding how such services might be funded. Stakeholders consider that there would be significant value to system funders and policy makers in consulting more effectively with the physiotherapy workforce to better understand the role it could play in provision of cost effective services.

4.3 Key Enabler: Data and Evidence Based Practice (EBP)

Data and evidence-based practice (EBP) is an enabling factor upon which the physiotherapy driver model (supply and demand) is built. Through the information gathering stages and stakeholder consultation process, it was noted that the need for data and evidence is a critical component that influences both demand and supply drivers. Stakeholders identified that there was still insufficient data collection, analysis and reporting methods to support the physiotherapy workforce and the activities/services it performs.

Studies show that EBP improved attitudes and increased awareness, knowledge, skills, and confidence among physiotherapy staff (Bernhardsson, et al., 2016). Findings suggest that after adopting EBP, physiotherapists show enhanced confidence in assessing clients for falls risk. The majority of studies identified positive attitudes towards EBP and research use in practice, with many physiotherapists viewing EBP as a necessary and integral part of their role that helps inform clinical decision-making (Scurlock-Evans, Upton, & Upton, 2014). Strategic planning for implementing EBP and easy access to resources are key factors in guiding future workforce for research-based practice.





A systematic review by Harding et al. shows that supporting evidence-based research activities through participation and funding are known to have many advantages. A positive research oriented culture and interventions incorporated among the health workforce are beneficial to patients, staff and the organisation (Harding, Lynch, Porter, & Taylor, Organisational benefits of a strong research culture in a health service: a systematic review, 2017).

Although stakeholders identified that insufficient research had been conducted in the area of innovative service delivery models they did note that EBP is now part of core physiotherapy practice and has essentially become part of business as usual.

Some issues were raised by stakeholders in relation to the health care system challenge of failing to meet the professions demand for improved approaches to the management of 'big data' that is large in volume and complex. This is a particular issue where physiotherapy services have been unable to provide enough evidence to demonstrate the positive impact they have had on patient outcomes.

The NSW Health Analytics Framework provides an ideal context for development of the appropriate reporting and information management capabilities to identify and deliver efficient and effective models of data collection, analysis and reporting to articulate the value of the profession within the healthcare system.





5 Challenges Encountered by the Physiotherapy Workforce

This section of the document details some of the key challenges identified through the literature and by stakeholders encountered by the physiotherapy workforce.

5.1 Rural and Remote Service Considerations

The imbalance in the supply and demand for health care services in rural and remote regions results in inequitable access to services. Physiotherapists are critical members of the health care team that provides direct patient care, education and advocacy in the community (Roots & Li, 2013). Barriers such as distance, travel time, lack of financial incentives, availability of work and arrangement of accommodation are some of the factors which contribute to a shortage of staff in rural areas.

Limited access to culturally responsive services, particularly in rural and remote areas, may reduce the potential demand for physiotherapy services from Aboriginal and Torres Strait Islander communities. When services offered are not culturally responsive Aboriginal and Torres Strait Islander people may not be aware of them, what they deliver, how to access them or they may feel unsafe in accessing them.

A number of challenges identified by physiotherapy staff working in rural areas include a lack of career advancement opportunities, isolation, lack of professional and peer support including networking, access and support to attend continuing professional development activities, lack of remuneration and recognition and lack of locum availability (Australian Physiotherapy Association, The factors affecting the supply of health services and medical professionals in rural areas, 2011).

Stakeholders identified that strong collaboration and communication between Local Health Districts and staff in relation to organisational strategic aims can increase staff satisfaction and support retention. Development of virtual teams for distance learning that are supported by tele-health technology is one possible way to help engender a positive culture in the workplace and support team development.

It is important to increase the awareness and understanding of the allied health professions (including physiotherapy) in order to ensure decision makers, understand the positive impact they have on outcomes for patients. As a result of this increased awareness, funding models should reflect the value that allied health delivers to the health system.

5.2 Career Pathways and Opportunities

There are currently limited employment opportunities for graduates in the public health system despite a large volume of physiotherapy graduates coming through the education system. As a result, graduates are increasingly finding employment in private practice. Stakeholders identified at a senior level there are limited opportunities for career progression. As a result, many mid-career physiotherapists take a different path into other professional disciplines or management roles in order to advance their careers.

Stakeholders discussed the option of developing new models of care whereby specialist teams visit rural and remote areas from metro facilities, for example spinal, to upskill staff. Stakeholders also identified there are possible opportunities for district wide specialist positions that focus on specific caseloads thereby also providing a new opportunity for a physiotherapist to develop their career whilst also meeting population health needs.





Limited availability of resources and career enhancement tools lead to growth restriction and isolation of the workforce working in a rural and remote areas (Owen & Tracy, 2008). Due to constrained funding models, there may be limited opportunity for young physiotherapists to utilise technologies in clinical practice and therefore advance their skills set for career advancement purposes.

Studies have identified positive attitudes towards EBP, and many physiotherapists view EBP as an integral part of their role which helps to inform clinical decision-making (Scurlock-Evans, Upton, & Upton, 2014). Despite explicit recognition for and the importance of EBP, physiotherapists are plagued by evidence-practice gaps (Kumar, 2015). As such physiotherapists often find it challenging to apply EBP into every day clinical practice. Time, work pressure and lack of access to resources are the most commonly reported barriers to employing EBP (Scurlock-Evans, Upton, & Upton, 2014).

5.3 Implementing New Technologies

The literature identified challenges encountered within the workforce and outside the workforce in implementing new technologies into practice. One of the barriers is the limited adaptation of social media by clinicians due to several factors including legislation, scope of practice, access, safety, privacy and time (Knight, Werstine, Rasmussen-Pennington, Fitzsimmons, & Petrella, Physical Therapy 2.0: Leveraging Social Media to Engage Patients in Rehabilitation and Health Promotion, 2015). Also, some evidence shows that younger people in the workforce are more comfortable using technologies in comparison to older staff. The presence of gaps in knowledge, perceptions about technologies, cultural barriers and financial implications limit the usage of the technologies in an effective way (Odole, Odunaiya, Ojo, & Afolabi, 2015).

The implementation of technology requires significant investment in information communication technology and infrastructure development along with training opportunities for both health care providers and patients (Yagos, Olok, & Ovuga, 2017). Other added expenses identified are attributed to software and hardware maintenance, initial and ongoing training of staff, risk management activities and costs related to IT professionals (Australian Physiotherapy Association, InPractice 2025: Final report, 2013).

Stakeholders reported that more specific research is needed that identifies the outcomes associated with utilising technology in physiotherapy services. There was some scepticism about adopting technology that appears to be time-consuming and involves significant capital cost. It was acknowledged that technology can provide greater access to services but at the same time it could impact negatively upon the therapeutic relationship between physiotherapist and patient if there is less face-to-face contact time. Stakeholders identified certain challenges around using technology that need to be addressed such as issues around patients' privacy and confidentiality, supportive infrastructure, staff resistance to its usage, patients' feasibility and acceptability and managing technical problems.

5.4 Introduction of New Models of Care

A number of challenges associated with new models of care were identified by stakeholders. Although new models of care (e.g. physiotherapist-led care) have potential to provide improved services, better patient outcomes and can bring job satisfaction to physiotherapists, if they are implemented without taking account of the resourcing implications there is a risk of simply increasing workload.





Similarly, as multidisciplinary teams that work across acute and community settings (for example, in integrated models of care) become more common the challenge of redeploying physiotherapist resources which are traditionally hospital based into community settings may emerge. 'In person' participation in multidisciplinary meetings, for instance, may prove a practical barrier.

Increasing too is the emphasis on primary and community-based care inherent in Integrated Care. Similar challenges are likely to be faced as physiotherapists work more frequently across the boundaries of primary and secondary care. Delivering truly patient-centric care will require all clinicians to work in truly team-based models. This will mean potentially sharing leadership at different parts of the patient journey and delegation of some clinical tasks which are currently seen as within the sole purview of one professional group (e.g. for physiotherapy this could be strength/exercise testing prior to discharge) with other workforce groups to expedite appropriate treatment and prevent delays for the patient. Facilitating a more agile, yet clinically safe and appropriate continuum of care to wrap around the patient will require ongoing design, leadership and practice which will challenge, not just the physiotherapy workforce but all the component professions.

5.5 Supporting Aboriginal and Torres Strait Islander People to Participate in their Care

Inequalities in health outcomes between Aboriginal and Torres Strait Islander people and their non-Aboriginal and Torres Strait Islander counterparts are noted to be the largest in the world (World Health Organisation, 2008). Studies have demonstrated that often there is poor availability of physiotherapy services to Aboriginal and Torres Strait Islander people living in rural and remote areas.

Aboriginal and Torres Strait Islander people should be closely engaged in the planning and delivery of health services. One of the barriers identified to providing care to the Aboriginal population was a shortage of supply of private physiotherapists in rural areas and a lack of financial incentives to develop culturally competent and safe environments in which to work with Indigenous people (Australian Physiotherapy Association, The factors affecting the supply of health services and medical professionals in rural areas, 2011).

When communication and education about Aboriginal and Torres Strait Islander cultures is not sufficient to those delivering services then there may be poor outcomes for individuals, their families and health services (Lowell, et al., 2012). It is imperative that communication with Aboriginal and Torres Strait Islander communities is strong if the gap in outcomes is to be addressed.

An increase in cultural awareness will have a positive impact on the health outcomes of Aboriginal and Torres Strait Islander communities. Peer mentoring was identified as a "powerful tool for two-way learning to promote practice improvement". When an organisation was found to have put in place sufficient levels of management support and training for non-Aboriginal and Torres Strait Islander staff and where they partnered closely with Aboriginal Health Workers, there was evidence of an increased readiness to learn and adjust practice to deliver services in a more culturally appropriate manner.

The Aboriginal and Torres Strait Islander view of health is not just about the physical wellbeing of the individual. It is the social, emotional and cultural wellbeing of the entire community, a concept that is sometimes overlooked by mainstream health services. It is therefore unsurprising that mainstream health services do not secure the trust to provide effective access and care to Aboriginal and Torres Strait Islander people. In terms of





health service delivery, Aboriginal and Torres Strait Islander community controlled health services emphasise the importance of a holistic approach towards Aboriginal and Torres Strait Islander health care, where physical and mental wellbeing is linked to its historical and cultural context (Markwick, Ansari, Sullivan, Parsons, & McNeil, 2014).

Recognition of spirituality as a critical factor in Indigenous well-being can contribute to the development and implementation of health promotion and preventative projects. Health professionals, who are non-Indigenous, have a responsibility to understand the dynamic relationship between mind, body and spirit, to accurately address whole health when working with Aboriginal and Torres Strait Islander communities (McLennan & Khavarpour, 2004). The physiotherapy profession should therefore adopt and embrace culturally responsive practices and trauma-informed services.

A study in the Yolngu community (an Indigenous community located in the north-eastern Arnhem land in the Northern Territory) supported the idea that communication plays a crucial role in closing the gap to addressing Indigenous health. The key priority for the community was that health staff share their full story about the causes, nature, consequences, prevention, and management of chronic diseases. It was identified that serious limitations in communication and education have extensive negative consequences for individuals, their families and health services (Lowell, et al., 2012).

It was noted that evidenced-based health policies, for example the Preventable Chronic Disease Strategy (PCDS) that are reflective of the cultural and life circumstances of Aboriginal communities are important. Aboriginal Health Workers and Aboriginal Health Practitioners should be empowered to determine the priorities that meet the needs of their communities and to provide input into decisions about ongoing investment into undergraduate education and professional development of Aboriginal and Torres Strait Islander People. (Lloyd, Wise, & Weeramanthri, 2008).





6 Opportunities for the Physiotherapy Workforce

There are a number of opportunities identified through the literature and by stakeholders available to the physiotherapy therapy workforce that may be explored and developed in the future.

6.1 Role of Technology

Emerging new technologies are becoming a centre of attraction for delivering physiotherapy education, preventative care and therapeutic care to patients supported by the Australian and international literature. One study from the USA has shown that tele rehabilitation enhances service delivery which facilitated training via the web or telephone and reaches people living at a distance (Winstein & Requejo, 2015).

Stakeholders believed that the use of emerging new technologies will not only give better access and outcomes to patients but could also save time and cost of care.

Physiotherapists can use technology for a range of educational purposes including: teaching, training, supervision, online conferencing and simulation. Physiotherapy stakeholders expressed positive views about having an opportunity to use technologies to provide better access to rural and remote areas.

The use of social media and the internet has allowed more people with or without disabilities to connect with one another and support each other in real time. Evidence shows that incorporating social media in both design and delivery of physiotherapy care has enhanced patient engagement and participation in their care (Knight, Werstine, Rasmussen-Pennington, Fitzsimmons, & Petrella, Physical Therapy 2.0: Leveraging Social Media to Engage Patients in Rehabilitation and Health Promotion, 2015). There is an opportunity to explore the policy implications of organisation adaptation of health care social media and propose individual opportunities and guidelines for social media used by physiotherapists (Gagnon & Sabus, 2015).

Research shows the positive impact of using appropriate technologies in the multidisciplinary area for collaborative and efficient teamwork (Hinman, Delany, Campbell, Gale, & Bennell, 2015). Stakeholders also have identified that technologies can be used effectively as a valuable tool for team communication regarding shared care planning and patient management. Also, telephone-based health coaching is beneficial to educate patients about osteoarthritis and guiding appropriate exercise. It has also shown improvement in patients' physical activity and compliance to adherence to home exercise (Bennell, et al., 2016).

There is a significant opportunity for growth of technology in rural and remote areas to engage more clients and reduce wait time for service delivery. One potential way to reach more Aboriginal and Torres Strait Islander people residing in rural and remote areas is through technology, to deliver home-based care to families. Using telehealth such as video conferencing enables the client, physiotherapists and students working in rural areas to be connected to experts in the metropolitan region to deliver expert care (O'Hara & Jackson, Integrating telehealth services into a remote allied health service: A pilot study, 2015).





6.2 Allied Health Assistants (AHAs)

Evidence has shown that using Allied Health Assistants (AHA) more efficiently delivers better patient outcomes without compromising quality and safety of care. A study by Austin Health in Victoria found that patients receiving a specific intervention from a physiotherapy assistant had a shorter length of stay in hospital and were likely to be discharged to their home, instead of to a care facility (Duckett & Breadon, *Unlocking skills in hospitals: better jobs, more care*, 2014). Increasing AHA numbers is instrumental to improving patient satisfaction, clinical outcomes, recruitment and retention of allied health staff by ensuring that less complex tasks are undertaken by AHAs rather than by professional staff (Department of Health, Victoria, 2013) (NSW Health, *Allied Health Assistant Framework*, 2013). However, some stakeholders appeared to be concerned that physiotherapists could be replaced by AHAs in service delivery – it was felt that AHAs should support and complement physiotherapists and not replace their roles.

Other studies have found that assistants can be beneficial to patients care through reduced skin breakdown rates, a decline in average ventilator days per patient, and increased participation in day to day activities (Duckett & Breadon, *Unlocking skills in hospitals: better jobs, more care*, 2014). Also, an opportunity to use AHAs efficiently may enhance cost effectiveness of allied health service provision. Expanding the roles of physiotherapy assistants may not only reduce the workload of expert physiotherapists but may also allow more patients to be treated at current funding levels (Duckett & Breadon, *Unlocking skills in hospitals: better jobs, more care*, 2014).

Stakeholders acknowledged the value of utilisation of AHAs towards service provision after defining a clear role, and expressed views to give more financial incentives for the programs related to the training and employment of Aboriginal and Torres Strait Islander AHAs.

6.3 Addressing Aboriginal and Torres Strait Islander Health Needs

By developing and implementing culturally appropriate services and models of care the physiotherapy workforce can better meet the needs of Aboriginal and Torres Strait Islander people. The concept of a cultural navigator was identified as one role that could significantly enhance the current physiotherapy service offering to Aboriginal and Torres Strait Islander communities. Cultural navigators may provide support to Aboriginal and Torres Strait Islander people at clinic visits, help patients and families communicate with doctors and nurses, arrange language and cultural translation services and help patients and families find services.

Evidence shows that peer mentoring between the Aboriginal and non-Aboriginal health workforce can be a powerful tool for two-way learning to meet needs and promote practice improvement (Browne, Thorpe, Tunny, Adams, & Palermo, *A qualitative evaluation of a mentoring program for Aboriginal health workers and allied health professionals*, 2013). Data shows that in 2012, less than one percent of all employed physiotherapists were of Aboriginal and Torres Strait Islander descent with an average age of 35 (Australian Institute of Health and Welfare, *Allied health workforce 2012*, 2013). There is an opportunity for universities to encourage and facilitate more Aboriginal students to join physiotherapy courses. An effective partnership between Aboriginal Health Workers and non-Aboriginal health professionals is essential to achieving positive Aboriginal health outcomes.





Aboriginal and Torres Strait Islander communities living in rural and remote areas have very poor or no access to physiotherapy services. Provision of optimal support and resources to the physiotherapy workforce working in rural and remote areas will improve service access and availability of the service (Owen & Tracy, 2008). There is an opportunity to explore the kinds of technology that are useful in enhancing engagement, effective communication, information sharing and encourage participation of the Indigenous community in planning and delivery of their care.

Stakeholders representing the Aboriginal and Torres Strait Islander allied health workforce identified an opportunity to provide culturally appropriate and value centred care by introducing more holistic models of care such as opening community hubs in rural and remote areas. Universities play a vital role in attracting the future Indigenous allied health workforce by encouraging and supporting Indigenous students throughout their education. The system has an opportunity to deliver evidence-based and Indigenous-led care to the community by ensuring that placements are available to students of an Indigenous background. Stakeholders identified the need to incorporate Indigenous physiotherapists in leadership roles in order to develop and plan the future of the workforce.

The Northern Territory's Preventable Chronic Disease Strategy (PCDS) is one example of evidence-based health policies that are more reflective of culture and life circumstances of Aboriginal and Torres Strait Islander communities (Lloyd, Wise, & Weeramanthri, 2008). This model recommended that more power should be given to Aboriginal health workers and professionals in determining priorities and investing in undergraduate education and the professional development of health providers and policy officers. The Northern Territory government has made commitments to increase the number of Aboriginal and Torres Strait Islander people in clinical and non-clinical roles at all levels, recognising that this will improve health care planning, delivery and outcomes.

There may be an opportunity to develop a policy that focuses on Aboriginal and Torres Strait Islander recruitment initiatives. Increasing the number of Aboriginal programs and the total number of scholarships for physiotherapy students with Aboriginal and Torres Strait Islander status would be a positive step. The overarching aim of the policy would be to support closing the gap, reduce racial discrimination and improve health outcomes.

A focus on improving outcomes for Aboriginal and Torres Strait Islander people must be made a priority with the physiotherapy workforce. The workforce must strive to become more culturally aware and skilled in delivering services to Aboriginal people.

6.4 Advanced Scope of Practice

Physiotherapy services of the future will provide a more diverse range of services and will address a broader range of health needs and extend scope of practice into areas previously considered the domains of the medical and nursing profession (Australian Physiotherapy Association, InPractice 2025: Final report, 2013). A current example of this is seen in public hospital Emergency Departments where physiotherapists are leading orthopaedic screening clinics which reduces the burden on doctors and supports physiotherapists to extend their scope of practice. Both physiotherapy specialists and experienced generalists will address the complexity of health needs by applying a broad range of advanced scope clinical skills.

Due to the ageing population, chronic disease management and disability services, physiotherapists will play a major role in delivering multidisciplinary and interdisciplinary





care. The National Disability Insurance Scheme (NDIS) is one of the health reforms that will create more opportunities for allied health professionals to provide a broad range of quality care across all the areas (Gallego, et al., 2015).

6.5 Models of Care

Newly emerging models of care including holistic patient-centred care, integrated, multidisciplinary and interdisciplinary models may provide an opportunity for physiotherapy services.

Growing health needs along with emergence of more patient centric models of care, advancement in technologies and EBP have increased the scope of practice for the physiotherapy workforce.

An example of an emerging patient centred model of care in NSW is the Leading Better Value Care Program. Commencing in 2017/18 the NSW Health system will refocus - away from the traditional approach of measuring value in terms of volume/output in relation to costs, to measuring value in terms of the Institute for Healthcare Improvement Triple Aim of health outcomes, experience of care and efficient and effective care (in relation to costs). In this context, health outcomes are defined as the outcomes that matter to patients (NSW Health, 2017).

The NSW Health 'Whole of Health Program' (WOHP) is a centrally facilitated but locally led program which aims to improve access to care for patients across NSW. It began as the Whole of Hospital Program in February 2013 to drive the local change needed to improve patient delays, with NSW having fallen short of the 4-hour Emergency Department (ED) target (previously National Emergency Access Target or NEAT) in 2011 and 2012 (NSW Health, 2016).

Stakeholders consider that there is an opportunity for physiotherapy services to operate across the continuum of care. Stakeholders noted that physiotherapy services could be more engaged in criteria led discharge models, fracture clinics as well as roles in the emergency department. Most hospitals provide a broad range of outpatient services. Physiotherapists can play a vital role in early identification of factors that predispose to impairment and dysfunction and result in patients attending emergency departments. For example, physiotherapists could assess the risk of a fall in patients presenting with back pain.

Stakeholders also suggested a number of benefits that could be delivered through the development of new models of care. In relation to the management of chronic and complex diseases, physiotherapy services are capable of providing patient directed care by acknowledging patient awareness of their condition and engaging them more effectively in care. Also, new models of care have the ability to provide patients with improved access to care and more effective service delivery. Physiotherapists may have increased job satisfaction by utilising their full range of skills in newly developed models of care.





7 Additional Key Emerging Areas of Interest

In addition to the demand and supply drivers already identified, a number of key emerging areas of interest for the physiotherapy profession were considered through the horizons scanning and scenario generation process from the literature and consultation with stakeholders.

7.1 Activity Based Funding

Activity-based funding was introduced in July 2012 and as a part of its implementation, an Independent Hospital Pricing Authority (IHPA) was established by the Australian government. ABF is a way of funding hospitals whereby they get paid for the number and mix of patients they treat (Independent Hospital Pricing Authority (IHPA), 2017). ABF may include funding for physiotherapy as a part of overall case payment for acute inpatient services or it may involve a discrete payment for physiotherapy care for outpatient consultation (Australian Physiotherapy Association, InPublic 2025, 2015). Funding for physiotherapy services faces competitive tensions. Limited system resources and funding for physiotherapy roles will have major impact on service of the future. Stakeholders identified that there is a need for more efficient models of data collection, analysis and reporting in order that physiotherapy can better demonstrate its positive impact on patient outcomes.

7.2 National Disability Insurance Scheme (NDIS)

The National Disability Insurance Scheme (NDIS) will provide support and care to approximately 460,000 Australians under the age of 65 with a disability and extend support to their families and carers. The National Disability Insurance Agency (NDIA) is an independent statutory agency responsible for the implementation of the NDIS (Australian Department of Human Services, 2017).

The emergence of the NDIS presents as an opportunity as well as a challenge to the physiotherapy workforce. Currently there is a specific challenge with a small market of service providers under the NDIS scheme in rural and remote areas. The rollout of the NDIS will rely heavily on the availability of private and NGO service providers entering the marketplace and this is a concern in rural and remote areas. Challenges also exist in metropolitan regions around the skill mix of private and NGO service providers.

7.3 Rostering Best Practice

The appropriate alignment of clinician resources to patient activity is a challenge in health system management. Effective rostering is a critical tool in meeting the challenge that faces health services that operate seven days per week. This is due to the challenge in demonstrating the cost benefit of providing/funding weekend services and the associated improved patient outcomes. One qualitative study undertaken identified that physiotherapy managers perceived that a seven-day operational week would improve patient flow, quality of care and reduce adverse incidents, such as falls and intensive care admissions (Mitchell, O'Brien, Bardeel, & Haines, Challenges, uncertainties and perceived benefits of providing weekend allied health services - a manager's perspective, 2017). There are challenges associated with planning, staffing and management of seven-day services, mainly due to change resistance from a workforce that has traditionally operated during traditional working hours. System managers must therefore decide how best to allocate clinical resources based on operational needs and desired patient outcomes.





8 Gaps in the Current Body of Literature

Our review of the international literature suggests the following areas as offering potential for further research and investigation, particularly in new and emerging fields / areas and modalities of practice including

- The potential to better utilise technology to mitigate the impact of disability
- The outcomes of using social media to provide physiotherapy education, practice or research
- Evidence of proven outcomes regarding using new technologies and their cost effectiveness and/or realised benefits.





9 Conclusion

The challenges facing the physiotherapy workforce are not unique to this workforce. As with every other allied health profession, physiotherapy will need to adapt to ensure increasing patient demand is met in and out of hours, across both metropolitan and rural areas. As one of the largest of the allied health workforces, physiotherapy possess a degree of scale which offers significant future potential to address the challenges of increasing demand and chronic disease complexity most effectively.

As truly patient-centric models of care become more commonplace and the continuum of care integrates more definitively across the primary and secondary spheres, the contribution that physiotherapists make to patient care will become ever more essential. Evidence that this development has been anticipated already by the sector can be seen in the increasing implementation of physio-led models of care for certain patient cohorts. As these models mature and become more prevalent, clinicians will need to work increasingly at the advanced end of their scope of practice to support this approach effectively. This development, while welcome to the majority of physiotherapy stakeholders consulted, will require the more effective deployment of strategies to extend capacity and capability.

Increased staff flexibility will be key and until that is achieved existing staffing models will continue to experience increasing stress as patient demand for services rises and with it, patient expectations. New technologies and auxiliary roles offer potential to extend clinician capacity, but will require investment in time, infrastructure and training before benefits can be truly realised. Creative and innovative approaches to rostering practice will also be required to most effectively deploy staff in order for them to participate and lead care via multi / inter-disciplinary models of care. Achieving this will in turn require a shift from the prevalent Monday to Friday business hour's service configurations state-wide.

Additional work will be required to design new, flexible resourcing models which can offer improved levels of patient care and service while retaining sufficient workforce protection.

Enhancing the degree of involvement that physiotherapists have in future clinical service design will be a critical factor to future success. Only through such collaborative design can the system develop future models of care which will leverage the potential of new technologies, to improve patient care and outcomes delivered by a sustainable physiotherapy workforce.





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11 Appendices

11.1 Appendix A

Table 6 below lists the Physiotherapy Board of Australia approved programs of study.

Table 6: Physiotherapy Board of Australia approved programs of study

Education Provider	Program of Study Name
Australian Catholic University (NSW, QLD, VIC)	Bachelor of Physiotherapy
Australian Catholic University (NSW, VIC)	Bachelor of Physiotherapy (Honours)
Bond University (QLD)	Doctor of Physiotherapy
Central Queensland University (QLD)	Bachelor of Physiotherapy (Honours)
Charles Sturt University (NSW)	Bachelor of Physiotherapy
Charles Sturt University (NSW)	Bachelor of Physiotherapy (Honours)
Curtin University	Bachelor of Science (Physiotherapy)
Curtin University	Bachelor of Science (Physiotherapy) (Honours)
Curtin University	Master of Physiotherapy
Flinders University	Master of Physiotherapy
Griffith University	Master of Physiotherapy
James Cook University (QLD)	Bachelor of Physiotherapy
James Cook University (QLD)	Bachelor of Physiotherapy (Honours)
La Trobe University (VIC)	Bachelor of Applied Science and Master of Physiotherapy Practice
La Trobe University (VIC)	Master of Physiotherapy Practice
Macquarie University	Doctor of Physiotherapy
Monash University	Bachelor of Physiotherapy – Advanced Research (Honours)
Monash University	Bachelor of Physiotherapy (Honours)
University of Canberra (ACT)	Bachelor of Physiotherapy
University of Canberra (ACT)	Bachelor of Physiotherapy (Honours)
University of Canberra (ACT)	Masters of Physiotherapy (Graduate Entry)
University of Melbourne	Doctor of Physiotherapy
University of Newcastle (NSW)	Bachelor of Physiotherapy (Honours)
University of Notre Dame Australia	Bachelor of Physiotherapy
University of Notre Dame Australia	Bachelor of Physiotherapy (Honours)





University of Queensland (QLD)	Bachelor of Physiotherapy (Honours)
University of Queensland (QLD)	Master of Physiotherapy Studies
University of South Australia (SA)	Bachelor of Physiotherapy
University of South Australia	Bachelor of Physiotherapy (Honours)
University of South Australia	Master of Physiotherapy (Graduate Entry)
University of Sydney	Bachelor of Applied Science (Physiotherapy)
University of Sydney	Bachelor of Applied Science (Physiotherapy) (Honours)
University of Sydney	Master of Physiotherapy (Graduate Entry)
University of Technology Sydney	Master of Physiotherapy
Western Sydney University	Bachelor of Physiotherapy

