NSW Health

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Allied Health COVID-19 Workforce Innovations

Executive Summary Report

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Produced by: NSW Ministry of Health

The NSW Ministry for Health acknowledges the traditional custodians of the lands across NSW. We acknowledge that we live and work on Aboriginal lands. We pay our respects to Elders past and present and to all Aboriginal people.

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SHPN (RHD) 221102
ISBN 978-1-76023-390-7

July 2023

Disclaimer: The purpose of this report is to outline the allied health workforce models that were implemented as part of the COVID-19 response and evaluated as part of this project approach. It is intended that these allied health workforce models be considered within LHD's/ SHN's context for local customisation and implementation.

Contents

Background

In 2020, the COVID-19 pandemic arose as a significant health event serving as a catalyst for rapid transformation in healthcare systems. To support the pandemic response NSW Health provided funding of $34 million (over the initial 6 months) to LHD/SHNs for allied health services. The initial enhancement funding was provided for a 6-month period from April to September 2020. As the pandemic evolved, the funding period was extended to the first quarter of 2021.

Allied Health-led models of COVID-19 response

In the last 36 months, NSW Health allied health services and Allied Health Professionals (AHPs) have adapted to respond to the challenges of the COVID-19 pandemic. They have been a critical element to the pandemic response, being agile and flexible and often working in advance practice roles. The enhancement provided a unique opportunity for LHD/SHN allied health services to develop, pilot and implement models of care which support patients in ED, ICU, improve patient flow and discharges for inpatients and prevent admissions in emergency departments and community-based services.

This report provides three views to the implemented allied health-led models:

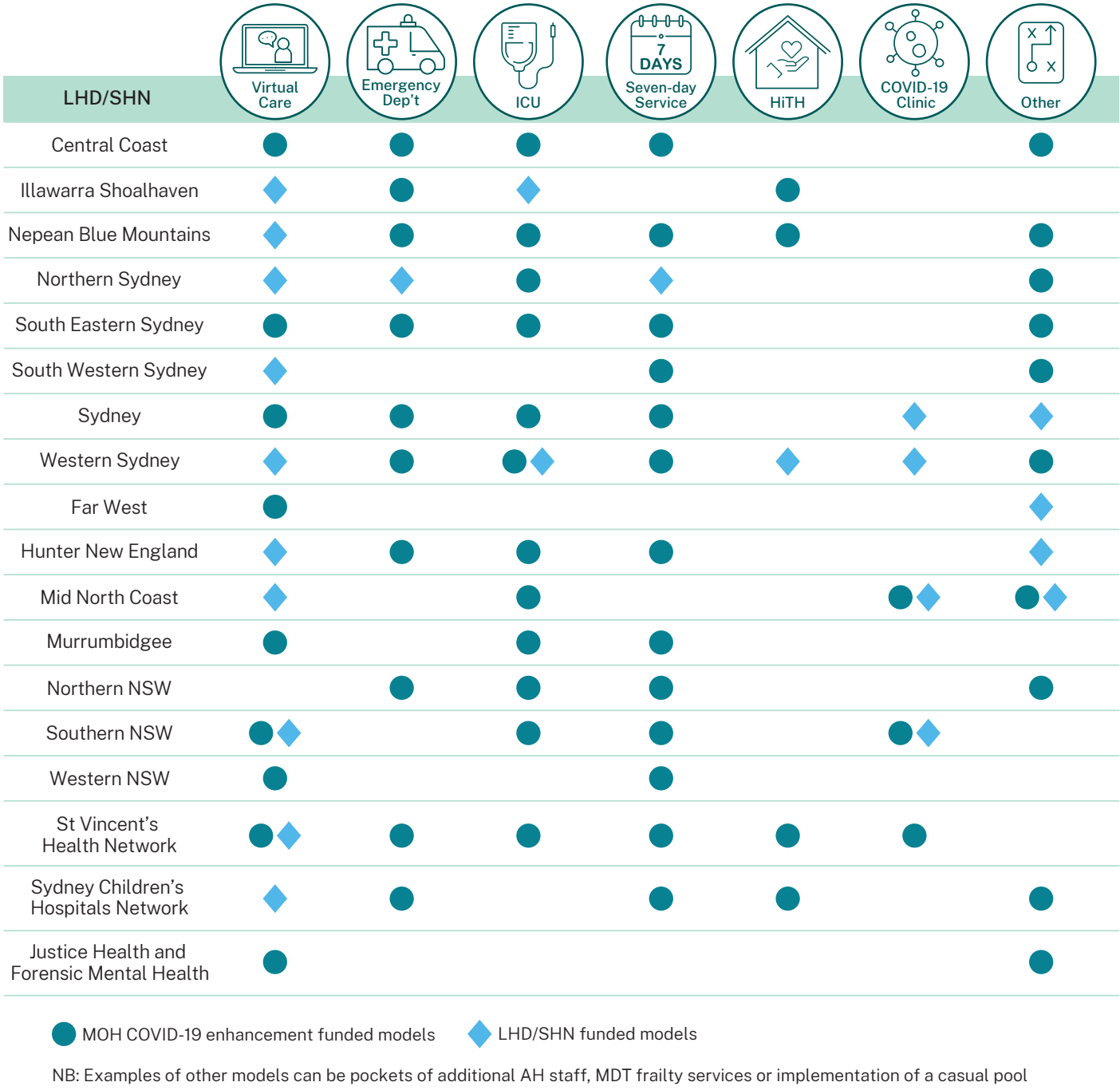
Figure 1 provides a snapshot of the allied health models reported by LHD/SHN allied health directors as being implemented or enhanced in response to the COVID-19 pandemic.

Table 1 details the high-level modes of working across the state. These modes of working do not pertain to specific models in each LHD/SHN, but rather reflects an overview of the ways in which allied health were utilised during the pandemic.

Appendix 1 provides a spotlight on examples of innovations in models of care that have been implemented.

It is important to note that a number of these strategies changed in scope and size from 2020 to 2021 as the COVID-19 situation changed. Moreover, there are many other existing allied health models of care not listed, which contributed to the COVID-19 response.

Figure 1: Snapshot of Allied Health Led Models implemented in 2020 in response to COVID-19



NB: Examples of other models can be pockets of additional AH staff, MDT frailty services or implementation of a casual pool

Examples of the modes of working that were most prevalent in the system's response are highlighted in Table 1 below.

Table 1: Summary of Allied Health led models in response to COVID-19

Description	Impact as a COVID-19 response strategy	Ongoing impacts
Multidisciplinary Allied Health Teams in Emergency Department (ED) facilitating safe, supported early discharge		
Implementing a multi-disciplinary allied health team in the ED of a hospital to include a rapid response seven-day, extended hour's service, with a team of physiotherapists, social workers, and occupational therapists providing timely allied health multi-disciplinary treatment. Child Life Therapists included as part of the Paediatric ED Model of Care.	Supported discharge from the ED back to the patient's home. Prevention of avoidable admissions, particularly for those who are elderly. Increased patient throughput in ED due to the additional ED based Allied Health resource. Demonstrated significant return on investment.	RAID-ED at WSLHD has now been permanently embedded as a result of the pilot and quadruple aims achieved – broader implications on patient flow.
Allied Health in the Intensive Care Unit (ICU)		
Implementing additional allied health resourcing in the ICU	Early intervention in ICU, particularly for COVID-19 patients who, due to co-morbidities, would experience a long recovery. Allied health reduced hospital acquired functional decline, ventilator dependency and supported patients to regain functional independence and return home with independence. Standard ICU workforce models were supplemented with allied health staff with critical care skills. Physiotherapists, social workers, pharmacists, occupational therapists, speech pathologists, radiographers and dietitians are engaged and mobilised to support increased patient volume.	Increased use of physiotherapists in ICU. For example, St Vincent's hospital developed a model of care for physiotherapists in ICU and developed educational training programs/papers to support this. Increased multidisciplinary allied health models of care in the ICU.
Seven-day Allied Health service		
Providing allied health services 7- days a week by increasing allied health resources	Continued allied health services during weekends in ED, ICU, Rehabilitation, Respiratory Inpatient Units resulting in: ▪ Improved functionality in patients ▪ Improved patient flow ▪ Increased hospital discharges.	Affirmed strong evidence that providing certain AHP services on a seven-day a week basis improves patient outcomes (e.g. via reduced rates of hospital acquired functional decline) and can reduce length of stay as patients admitted on the weekend suffer from poorer functional outcomes than those admitted during the week. Acute Care (seven-day) Model of Care in South Western Sydney Local Health District is an example of this model.

Description	Impact as a COVID-19 response strategy	Ongoing impacts
Allied Health services delivered via virtual care		
Providing allied health services remotely through virtual technology	Important outpatient services continued to be provided in a different way. Non-urgent services that are assisting patients are still delivered, reducing a backlog of demand once the virus is contained.	Stakeholders reported improved access to services for patients unable to travel, a need to deliver care in different modes, and the ability to service the population's demands. Rpavirtual and the virtual hospital model is an example of this. Sydney Children's Hospitals Network developed virtualKIDS. The service was established in June 2021 to deliver safe, patient centred, remote COVID-19 care to children in the home.
Expanded Allied Health Assistant support		
Expanded Allied Health Assistant support to assist AHPs in their various disciplines	Allied Health Assistants are used as an extra resource ensuring that patients still receive high quality interventions in a timely manner by supporting with basic allied health skills. During the pandemic Allied Health Assistants were used to deliver 1:1 therapy sessions and therapy groups (i.e: Occupational Therapy, Physiotherapy). They also supported menu completion and meal delivery (Dietetics).	Effective, safe low value role substitution frees up other clinicians to perform more complex care activities. Top of scope working enhances job satisfaction.
Special Health Accommodation Hotels (SHAs) led and supported by Allied Health		
A "health hotel" that provides a quarantine environment with the ability to test suspected cases, clinically manage suspected and confirmed cases and cohort individuals in a supportive setting	Providing comprehensive health care services to travellers that either have COVID-19, are at risk of having COVID-19 or who have complex health needs that are also required to quarantine.	AHPs working in new leadership and advance practice roles. Sydney Local Health District implemented an allied health response team based in the SHA which provided virtual comprehensive allied health assessment, intervention and case management to all patients and their families admitted, addressing their physical, functional, psychological and psychosocial needs.
Community COVID-19 care teams led and supported by Allied Health		
Multidisciplinary teams in the community managing patients in two ways: 1. Monitoring and managing COVID-19 positive cases in community environments 2. Additional community allied health enhancements	Managing patients in the community created capacity in the hospital system allowing the most severe cases to be treated in the hospital environment.	Hospital avoidance was achieved through the provision of safe, effective care in the home. South Eastern Sydney LHD implemented a COVID-19 Community Management Centre (CMC) that completed initial assessment calls and follow up calls to manage patients. SCHN provided supervised accommodation and care for Children and Young People (CYP) whose parents were hospitalised and who did not have access to care and supervision for the period of their parent/carer's hospitalisation or illness.

Description	Impact as a COVID-19 response strategy	Ongoing impacts
Aged Care Facility Response * (*Strike Force is a NSLHD specific model)		
Supporting Aged Care Facility Residents at home facilitated via allied health support	Allied health working in multidisciplinary teams that supported the management of aged care residents during COVID-19, including residents in lockdown and with limited access to their usual care providers. Physiotherapy, Occupational Therapy, Pharmacy and Dietetics were involved in the Geriatrician-led model which supported 2,662 patients. Many other residents (1,955 or 73% of patients) were able to be managed in place, resulting in fewer emergency department presentations and exposure of our most vulnerable patients to COVID-19.	Physiotherapy has an ongoing role within the Strike Force teams to manage Aged Care Facility patients in place, particularly for falls, pneumonia and frailty. Awareness regarding the role of other allied health disciplines and their role in frailty has improved within the Aged Care Facilities.
Surge redeployment of Allied Health		
AHPs were redeployed in non-traditional roles including: ▪ vaccination centres ▪ swabbing clinics ▪ contact tracing roles ▪ deputy controllers ▪ operational and patient flow managers	Working in a non-traditional allied health capacity, using their skills and training as a clinical health workforce and leaders, allowed allied health to be used in innovative ways. Many AHP's led special response teams and managed the clinics/ centres as deputy controllers and operational and patient flow managers (including Special Health Accommodations).	Raised the overall profile of AHPs across the healthcare system and to the public. Highlighting the broad leadership, operational and clinical skills of AHPs which they bring to many different areas of care, as well as their ability to upskill rapidly and be both agile and flexible. The use of pharmacists in vaccination was particularly innovative, as was the Qudos Vaccination Hub operationally run by a redeployed Dietitian. Many other vaccination centres also had trained AHPs working in both vaccinator and non-vaccinator roles.

Appendix 1

Spotlight on examples of innovations in models of care

The following section provides four case studies highlighting the successful implementation of allied health and multi-disciplinary models of care. These models demonstrate the value of allied health during COVID-19 which have the potential to be scaled across the NSW health system.

1. Rapid Assessment, Intervention and Discharge – Emergency Department (RAID-ED)

What was done?

The Rapid Assessment, Intervention, and Discharge-Emergency Department (RAID-ED) model of care (MoC) was an initiative implemented across Westmead and Blacktown Emergency Departments (ED) to lower the demand on inpatient hospitals beds for non-COVID-19 patients. The primary aim of this intervention was to reduce the risk of COVID-19 exposure by preventing unnecessary hospital admissions of patients presenting to ED by facilitating early discharge planning from allied health. The secondary aim was to measure patient experiences of the RAID-ED team and their satisfaction with the treatment received. The intervention included a rapid response seven-day, extended hours service, which included a team of physiotherapists, social workers, and occupational therapists providing timely allied health multidisciplinary treatment at the front door.

Impact

During its pilot period between October 2020 – December 2020, the team saw 1702 patients with over 61% of these patients directly being discharged from ED; and 31% of these discharged patients receiving additional follow-up care and services arranged post discharge.

Table 2 below illustrates the efficiencies made in the period between October and December 2020 across both Westmead and Blacktown sites. While Table 3 further below, reflects the performance metrics with regards to falls patients seen at both sites.

Table 2: Whole of ED performance metrics

KPI	Westmead	Blacktown
TOC (average)	Improved by 3%	Improved by 6%
ETP (average)	Improved by 3%	Improved by 7%
ED ALOS	Improved by 34 mins	Improved by 74 mins
Stays over 24 hrs	Oct-Dec 2019 = 732 Oct-Dec 2020 = 30	Oct-Dec 2019 = 567 Oct-Dec 2020 = 8
Admission rates	Decreased 1.5%	Decreased 0.3%
48 hr Representation	2.2%	2.1%

Table 3: RAID ED performance re: falls patients (Cat 2-5)

KPI	Total
Number of falls patients Cat 2-5 seen by RAID in ED	268
Number of **falls patients** Cat 2-5 **seen by RAID** in ED **and admitted**	188 (13% of total RAID activity)
Average inpatient bed day savings per patient	1.65
Bed day cost savings due to decrease in inpatient ALOS	310.2
Bed day cost $$ efficiency due to decreased in inpatient ALOS	$310,200

Critical Success Factors

- Encouraging transdisciplinary working within the Allied Health team. Physiotherapists upskilled occupational therapists to assess mobility of broader acute patient presentations seen in the ED
- Training sessions were organised for all allied health staff in the model to embed the model of care consistently across two emergency departments
- The skill mix of each allied health discipline was designed and rostered to align with patient demands and service gaps
- Strong, capable, change champions that supported the pilot and encouraged staff to "buy-in" to a new model. Executive support provided to promote and advocate for the new model of care
- Effective consultation with all stakeholders about the change, including feedback sessions to capture real-time issues / concerns

2. Quick Access Response Team (QuART)

What was done?

The Quick Access Response Team (QuART) is a transdisciplinary team of allied health staff, based in Shoalhaven Hospital and Wollongong Hospital, which provides a short intensive two-week service to patients in their homes.

- The Shoalhaven team consists of Occupational Therapy, Physiotherapy, Social Work and Speech Pathology.
- The Wollongong team consists of Dietetics, Exercise Physiology, Occupational Therapy, Physiotherapy and Social Work.

The teams consist of a variety of allied health professions to maximise the breadth of skills of the workforce, but there is a focus on team members to be trained in core competencies across professions to build capacity and enable more comprehensive care delivery for each interaction. The primary aim of the team is to provide coordinated allied health support and intervention to enable the avoidance of an imminent admission; or support early discharge for patients requiring urgent medical investigation/interventions in the first 72 hours of admission.

Impact

During the pilot, the following results contributed to improved patient flow:

- Emergency Department avoidance (threatened presentation) – 51 patients
- Admission avoidance of patients who presented to Emergency Department – 185 patients
- Facilitation of early discharge of admitted patients (<72hr admission) – 37 patients

Since the implementation of the pilot in August 2020, the majority of the impact seen has been through admission avoidance – reflecting a significant number of avoided admissions across both sites. This results in improved patient flow, less occupancy and creating capacity for potential COVID-19 related surges. During this pilot phase, a non-cash value bed day saving was estimated by using an average length of stay for each site, as illustrated in Table 4 below.

Table 4: QuART Benefits Case

Site	Number of patients	Average acute admission cost for site (NWAU for Acute services)	Cost avoidance	Bed Day Savings
Wollongong	124	$6,033 per admission	$748, 092	441 bed days
Shoalhaven	112	$5,400 per admission	$604,800	320 bed days
Total			$1,070,904	761 Bed days

The pilot also had a secondary effect in increasing safe, supported discharges across three sites, accumulating in a total length of stay saving of 92.5 days. Importantly, QuART also yielded extremely positive Patient Reported Experience Measures (PREM), specifically identifying short wait times and goal understanding as some of the key insights. QuART patients felt involved with their care plan and treated with respect when seen by the QuART team.

As a result of the successful planning and implementation of the model, QuART was recognised as a finalist for the Secretary's Award which recognises initiatives that support NSW Health's vision for a sustainable health system to deliver outcomes that matter to patients, is personalised, invests in wellness and is digitally enabled.

Critical Success Factors

- Provision of interdisciplinary training for the team, focusing on honing core competencies across the professions to build capacity and provide comprehensive care to patients
- Developing a holistic care mindset within the team, to enable interdisciplinary work
- Development of a clear, purpose driven plan that is supported by executives
- Embracing technology as an enabling factor to implement the model of care

3. Acute Care (seven-day) Model of Care

What was done?

The model of care aims to lower the demand on hospital inpatient beds through the provision of additional effective and efficient seven-day allied health services in SWSLHD. The MoH workforce enhancement of Dietetics, Occupational Therapy, Physiotherapy and Social Work services across the SWSLHD facilities was designed to improve access to high quality care, improve clinical outcomes, system efficiency and improve patient and staff experience. The allocation of additional resources over seven-days was based on the highest clinical impact areas following consideration of evidence-based models of care and matching to facility inpatient service demands and local context. This covered additional services for Dietetics, Occupational Therapy, Physiotherapy and Social Work.

Impacts

- The model has increased the profile of allied health professions, indicating an improved understanding of AHP scope of practice and contributions
- The pilot highlighted the demand for a seven-day allied health service required to meet the needs of the community
- Executives and other health professions are supportive of a seven-day service post implementation of the pilot model
- Emphasized the demand for holistic, comprehensive care provided

Critical Success Factors

- Recruitment/onboarding processes to assist with attracting and retaining staff to fill and backfill roles
- Effective consultation with all the allied health professional leads/managers about the change, including feedback sessions to capture real-time issues / concerns
- Strong executive support required for a seven-day service
- Financial support required for establishment of a new model of care

4. RPA Virtual Hospital

What was done?

At the start of the COVID-19 pandemic, RPA Virtual hospital pivoted to play a key role in the COVID-19 response strategy. They rapidly responded to the clinical care needs of patients with COVID-19 isolating at home or in the Special Health Accommodation using their Virtual Care Centre.

As part of the COVID-19 response, a seven-day rpavirtual Psychology team was introduced to implement the rapid delivery of psychological care through virtual care. The primary aim of the rpavirtual Psychology team is to provide person-centred, evidence-based, psychological care to (a) COVID-19 positive patients who are isolating at home as well as (b) people in quarantine in the special health managed hotels. Psychological care included assessments, crisis counselling, targeted psychological strategies and interventions as well as appropriate referrals to other services. The rpavirtual Psychology team sits within the larger rpavirtual care team, which includes medical, nursing and allied health.

A rpavirtual Social Work team was also introduced to provide virtual assessment and intervention to patients with psycho-social issues in home isolation or health hotel quarantine related to the COVID-19 pandemic. The service enables patients to continue to focus on their health for the duration of their stay in quarantine and following their discharge back into the community. The Social Work model of care provided both crisis intervention and short-term case management for the duration of hotel or home quarantine including ongoing accommodation, finances, services and referral and practical and emotional support.

As the COVID-19 pandemic progressed a range of allied health professions also assisted rpavirtual in their additional COVID-19 response operations including the discharge support team which was established in rpavirtual to provide overarching communication, management, and coordination of approvals for discharge of individuals in Special Health Accommodation.

Impacts

- The rpavirtual Psychology team have received over 2000 referrals and Social Work over 3000 referrals (up to February 2022). The team continue to develop and refine their processes. Social Work have also led a wellbeing service for COVID-19 isolated patients at home who are under the care of rpavirtual medical and nursing teams
- Rapid response to the COVID-19 pandemic with AHPs embracing new virtual models of care for both Psychology and Social Work which have traditionally been provided face to face
- Ongoing expansion and development of allied health models of care in rpavirtual including ongoing Psychology and Social Work services, expansion of the rpavirtual fracture clinic (Physiotherapy) and ongoing implementation and evaluation of the new virtual rehab service (includes Physiotherapy, Occupational Therapy, Speech Pathology, Allied Health Assistants)

Critical Success Factors

- The governance framework developed for the rpavirtual service ensured there were the policies and procedures in place to support the delivery of safe and, quality care, and engendered confidence within clinicians
- Executive sponsorship supported quick decision making that enabled rapid growth and change
- The willingness and flexibility of the district's clinical workforce to move into new and temporary roles

Opportunities for the Future

The pandemic created an impetus for change and has required districts/networks to question how healthcare is best delivered. Allied health has set a precedent for working in new, innovative ways in response to a crisis. The following are several key opportunities to consider in moving forward and strengthening the system should other funding be available:

1. **Improve system focus on multidisciplinary and transdisciplinary models of care** *that encourage staff to practice at top of scope across other clinical workforces, speeding the delivery of safe, high-quality, patient care while providing greater access to allied health service*
2. **Provide training** *for the Allied Health & Allied Health Assistant workforces to operate in more cross functional capacities, promoting multidisciplinary and transdisciplinary models of care within allied health*
3. **Build a workforce culture that supports innovation**, *such that staff are encouraged and are aware that they have permission to explore alternative ways of working to deliver health services*
4. **Foster relationships between allied health professions** *and other parts of the care continuum to create a more integrated service that meet community needs*
5. **Invest in the development of allied health leaders** *supported by a robust governance framework that enables change in a safe way*
6. **Review and update the current recruitment practices** *for allied health to reduce lengthy processing times and ensure efficient onboarding of staff, to ensure NSW Health particularly remains competitive in the tight, post-pandemic talent market*
7. **Establish a centralised pool of allied health resources** *for rural and remote areas to expedite the sourcing of candidates and alleviate periodic / crisis-driven staffing challenges*
8. **Standardise the set of procedures required for the implementation of Virtual Care models for allied health** *and enhance the adoption of these services state-wide*

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