

Building Sustainable Solutions to Placement Capacity in Allied Health Education

*Final Project Report for submission to the
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Executive Summary

This report describes evidence-based recommendations from the project:

Building sustainable solutions to placement capacity in allied health education.

The project was commissioned by the **Australian Council of Deans of Health Sciences** in 2024 to address the “availability of practical placements in allied health education”, because this problem is “one of the most critical educational issues facing the development of the allied health workforce in Australia”. The complexity and multi-system nature of the issue was foregrounded within the commissioning documents which highlights compounding shortages of allied health workforce across multiple sectors; including disability, aged care, health, education and community services.

This project has considered these broader system/s in relation to placement availability, which indicates that urgent prioritisation of cross-sector, cross-jurisdiction and system-focused solutions are needed. Realist methods were used to guide analysis of existing evidence and develop the evidence base necessary to address this critical issue which bridges both education and workforce; and as such involves multiple ministerial portfolios, funding bodies, service provision practitioners, as well as student and recipient communities.

This report brings together findings from four analyses to propose some key solutions to immediate, medium and long-term challenges around “the supply of allied health placements”. To reflect the complexity of systems which interconnect to influence placement availability, we adopt the term ‘placement capacity’ in preference to availability. We define placement capacity as: *the extent to which placements meet students’ learning needs, practice competency requirements, and ensure placements are distributed in ways which meet workforce demands.*

We use this term to capture the growth and developmental mindset required as well as the relationship (and at times tension) between increasing placement availability and workforce fragilities, particularly geographical and sector distribution(s). The concept of capacity further captures that the right types of placements are needed to meet student learning and practice competency requirements, in accordance with professional accreditation standards. Placement capacity conveys the positioning of student placements across multiple professions (both AHPRA and non-AHPRA groups), systems (i.e. education and service provision), and authorising environments (i.e. accreditation and liability); all of which are interconnected and changing according to wider external factors.

The four sets of findings have been identified from in-depth exploration of:

1. Analysis of accreditation documents (n= 94 across 19 professions) to identify promoting and limiting factors to placement capacity.
2. Focused literature review of existing evidence regarding placement capacity (full-text read of n=36 peer-reviewed articles) to test and strengthen nuances of context and setting on placement capacity (and interventions to increase it).
3. A policy review to identify how placement capacity might interface with policy levers across different sectors (n=62 documents).
4. Survey to refine and extend the logical chains of influence embedded in the analyses, recommendations and actions tentatively proposed (n=171 respondents).

A Project Advisory Group (n=17) participants who have expertise related to allied health education, professional practice, Aboriginal and Torres Strait Islander cultural responsiveness, student learning and the overarching policy environment) oversaw the project and provided feedback at three critical junctures to strengthen the clarity of linkages between the evidence-base developing during the project and the drafted recommendations and actions. Terms of reference are included in appendix 1.

Findings

We showcase the high-level findings from each of the four analyses in Table 1. These findings were used as evidence on two levels throughout the project: as key learnings in their own right, but also as ways of testing and refining the program theories developed as representations of how placement capacity can be supported in different contexts.

Table 1 Summary of analysis and findings

Data analyses	Findings
Accreditation analysis	<p>There is no one agreed upon definition for the term allied health placement. What a placement is/isn't is mostly inferred through the accreditation standards wording and/or expressed in more detail in supplementary documents.</p> <p>Salient catalysts for addressing placement capacity are placement parameters (e.g. placement length or practice areas), supervision and assessment requirements. The interaction of these can both afford or limit placement capacity.</p> <p>Accreditation standards that focus on demonstration of competency rather than inputs such as time or place requirements are able to support flexible, innovative approaches to placement design and delivery, enabling increased placement capacity.</p>

	<p>How accreditation standards are interpreted and actioned is dependent on the knowledge, skill and expertise and drivers of those engaging with / using the standards.</p> <p>Professional practice can change rapidly at a pace that can outstrip accreditation standard review leading to standards being out-of-step with practice needs and thus limiting placement capacity.</p>
Policy review	<p>Extensive expectations of service providers and practitioners to offer and supervise student placements are apparent within multiple allied health policies. Yet, these policies do not address how this time and expertise should be resourced. This resourcing is not currently funded within allied health service funding.</p> <p>Policy does not connect allied health student training with the skills or capacity needed for the current or future allied health workforce.</p> <p>Allied health services exist across multiple sectors with related ministerial and policy positions. However, the processes, resources and accountability for distinct cross-sectoral needs related to allied health placements and broader allied health workforce development needs are not clearly or consistently represented across relevant policy and procedural documents.</p>
Focused literature review	<p>Alternate placement and supervision models and formal partnerships have been effectively used to increase placement capacity in specific contexts. To be sustained, these interventions require enduring flexibility and collaborative resourcing.</p> <p>Rural locations and hospital settings are well represented within the evidence review. However, the distribution of evidence is limited across allied health professions. Further, our review identified no evidence of allied health placement capacity which explicitly addressed Aboriginal and Torres Strait Islander populations.</p> <p>Recommendations in the literature call for increased evidence generation and reporting to enable translation and further testing of placement capacity interventions.</p>
Survey	<p>Support and agreement of drafted program theories was high.</p> <p>Respondents identified that program theories were inter-related - action in one program theory area in isolation would be insufficient to facilitate sustained placement capacity.</p>

	<p>Conceptualising placement capacity as an adaptive system within other systems, including allied health workforce, opens opportunities for sustainable, quality and authentic learning.</p> <p>Perceived ownership of placements are important drivers of placement capacity. These dynamics, and the proximity to workforce development objectives, tangibly impact the experiences of providers that offer student placements.</p>
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The evidence-based recommendations developed and revised through the project are presented below. Within each recommendation, we suggest actions to be undertaken over short (i.e. 2-3 years) and longer-term (i.e. 5-6 years) timeframes. Where possible, we identify agencies responsible for actions.

Framing our recommendations around placement capacity enables us to utilise evidence developed within the project to suggest potential consequences of not acting; or of addressing recommendations with short-term solutions that don't address whole-system and future needs. Rising pressures within systems of allied health service provision and workforce that interconnect with student placements – are evident within the data we collected and analysed for this project. Insufficient availability of allied health student placements over time is a symptom of intersecting issues across these systems, including but not limited to: increasing and diverse demands for allied health services and workforce; the rapidly changing context of funding for allied health services across sectors and populations; and cost of living pressures straining student engagement with traditional unbroken 'blocks' of placement.

Added to this complexity is the difficulty of identifying and advocating for an 'allied health profession', which reflects a large number of individual professions with different scopes of practice and focus, interacting across sectors and policy areas, with activities directed by a range of funding sources and priorities. While these positionings of allied health professions and professionals reflect strengths-based approaches to meeting the needs of diverse communities, these complexities generate challenges in identifying solutions for placement capacity that reflect the entirety and complexity of the allied health professions. It is for this reason we have sought to use evidence from our project to carefully and critically reflect on future contexts of allied health service provision and workforce that will support placement availability to grow in step with student populations and the growing and changing needs of the allied health workforce.

Partnership and learning with Aboriginal and Torres Strait Islander Communities: Gaps and Silences

Cultural responsiveness in relation to placement capacity was inferred, rather than explicit, in the focused literature review and accreditation analysis. Whilst there was some evidence of initiatives aimed at tailoring resources and involving community members in placement delivery, there was a lack of evidence of specific partnerships with Aboriginal communities or exemplary placement experiences that promote culturally responsive practice. Accreditation documents emphasised the need for culturally safe practices and support services within university curriculums and placement experiences. However, a significant barrier to establishing these placements is the scarcity of Aboriginal and Torres Strait Islander health professionals who can supervise and assess students, coupled with limited resources from universities to employ or contract the necessary supervisors.

Recommendations

Our key takeaway from the project reflected throughout the recommendations, is that solving the problem of allied health placement capacity will be complex, *and* is also an opportunity to act on the drivers that will facilitate and enable allied health placement growth: by addressing the structural features that will build quality, diverse and sustainable allied health workforces and partnerships into the future.

Recommendation one: Align placement capacity development to current and future population needs.

Recommendation two: Ensure responsibility and resources for current and future allied health placements are visible in sectoral policies that include allied health services.

Recommendation three: Position allied health placements explicitly and systematically in National, State and Territory health professional education, training and workforce policy, guidelines and procedures to ensure an accountable, coordinated approach to allied health placement capacity.

Recommendation four: Ensure data regarding and informing allied health placement-education are systematically collected and reported for Commonwealth, State and Territory purposes, enabling evidence-based placement capacity development, evaluation and accountability.

Recommendation five: Prioritise a collaborative multi-partnership approach to the development, responsibility and accountability for allied health placements, that aligns with population and allied health workforce priorities, including Aboriginal and Torres Strait Islander peoples.

Recommendation six: Develop and evaluate quality placement models that prioritise student learning outcomes and deliver benefits for placement partners and the community.

Recommendation seven: Ensure professional accreditation placement requirements enable growth in allied health student numbers required to meet future allied health workforce capacity.

Recommendation eight: Embed flexible curriculum delivery in allied health programs to enable placement growth and innovations in practice education.

Building Sustainable Solutions to Placement Capacity in Allied Health Education

Project Preamble

“There is a great and pressing need for a fundamental improvement in the system and parameters of how placements are made available and undertaken, in order to overhaul what must become a sustainable, systemic response, over the next several years.”

ACDHS Research Project – Request for Proposal, Jan 2024

Building allied health student placement capacity is critical to develop the future health workforce to meet community and health care needs and in changing practice landscapes. Studies investigating placement availability typically focus only on one context, for example, rural (Moran et al., 2020; Walsh et al., 2023); or one perspective, for example placement educator perspectives (e.g. Newstead et al., 2024; Smith et al., 2023). Placements are a hallmark requirement of allied health programs and their importance in the curriculum is demonstrated through the attention given in the depth and degree of descriptions in program accreditation requirements. Yet, placement availability is a known barrier to growing the allied health workforce (Universities Australia, 2022).

This project took a whole of systems approach to synthesise the varying and cross-cutting influences on allied health student placements nationally, including across sectors, jurisdictions and professions. This work is vital to provide and scale the placement capacity required to enable the much-needed allied health workforce of the future.

This report draws together evidence during project **Building sustainable solutions to placement capacity in allied health education**, which commenced 13th May 2024 and was completed on 28th February, 2025. The project applied a realist approach to explore the multiple complex and changing systems which surround and impact placement capacity, by asking “what works for whom in what circumstances?” This contextual and logical focus of realist studies develops methods that produce transferable understandings. As such, realist synthesis was well-suited to identify logical pathways by which placement capacity can be increased within current and future landscapes of allied health education, policy, and service provision.

During the project we collected and iterated several data sources to provide recommendations that will support placement capacity building as demand for allied health services continues to expand.

Project Approach

Our project utilised a realist synthesis approach to bring different forms of evidence together to better understand allied health placement capacity within Australian contexts. Realist approaches seek to understand ‘what works, for whom and in what circumstances’ – using specific configurations of context, mechanism and outcomes to produce as units of analysis that explore how interventions ‘work’ in different contexts to achieve certain outcomes (Dalkin et al., 2017). Realist approaches are particularly useful to examine the complex, dynamic contexts of allied health placements as these relate to the range of individual disciplines with varied education requirements, participation across broad sectoral and policy environments, spanning service provider types and funding sources, and inclusive of regional, geographical and population influences and needs.

These understandings open up opportunities to hypothesise about how different mechanisms might work in different contexts to produce un/desired outcomes. The process of hypothesis generation, sometimes called *program theory* development (Funnell and Rogers, 2011), is iterative and synthesises broad evidence sources to generate new ideas for testing and refinement. Applied to the problems of increasing allied health placement capacity, this project provides recommendations that will enable education providers, policymakers, allied health service providers and broader communities to engage holistic interventions that address the problem of allied health placement capacity and are tailored to meet needs and outcomes of allied health professions and broader Australian communities.

The recommendations presented are evidence-informed theories of change; that is, under what circumstances placement capacity can be enhanced. Throughout the development of the recommendations, we have considered the impacts of their execution. The project and recommendations are necessarily focussed on increasing placement capacity, however, tying these recommendations together is the complex, yet adaptive relationship between placement capacity and workforce capacity. While the need to develop a capable allied health workforce to address Australia's evolving service demands has previously been identified as essential, the relationship between workforce capacity and placement capacity has remained relatively unexplored to date (Somerville et al., 2015). This project was predicated on the need to increase allied health placements to:

- Meet current and future allied health workforce growth requirements,
- To develop allied health placements that align with knowledge and skills required for current and future allied health practice, and
- To align strategic allied health placement capacity development with current and future needs of the Australian population, reflective of diverse cultural, social and geographic variance.

In considering the complex processes of increasing placement capacity, like Hounsou et al. (2025), we acknowledge that multi-component interventions are not easily captured

by one single program theory. This report summarises the methods and data which were used to develop and refine the recommendations (see appendix 2 for a summary of the methods used to develop and refine our recommendations). The recommendations were a product of iterations of five initial program theories (IPTs) developed at the start of the project, informed by project team expertise and a literature scan (predominantly systematic and scoping reviews). During the project, these theories were tested against findings from four data-driven processes as outlined in:

1. Focused literature review of empirical studies informed by IPTs
2. Analysis of allied health professions curriculum accreditation documentation
3. Policy and funding documentary review and analysis
4. Realist survey of key participant groups' perceptions of the early recommendations.

Iterative analysis resulted in the refinement of our program theories, from which the project recommendations and actions were derived. The findings and recommendations contained in this report are the culmination of targeted and integrated analyses across four aspects of the project.

Consultation throughout the project: Project Advisory Group (PAG)

Formed at the commencement of the project, the PAG (refer to Appendix 1 for membership) has been vital in continuing to shape the program theories and recommendations. With a project oversight role, the PAG has convened three times across the project to monitor progress and provide expertise, input and guidance regarding the project direction. The PAG is comprised of members who represent:

- University and practice educator perspectives across a range of allied health professions
- Cross sectoral and multi-disciplinary service provider perspectives
- Policy and accreditation expertise
- State Department of Health Executive perspectives
- Allied health consumer perspectives
- Allied health student perspectives

The perspectives offered within the group supported the realist review to remain grounded in the realities of those involved in placement systems. The expertise within the PAG has contributed to ongoing environmental scans of the accreditation, policy and evidence spaces. The networks of the PAG, further, were critical in gaining traction for the survey completed within the project, which resulted in 171 responses. During the concluding PAG meeting (4th February 2025) the recommendations and findings were presented for discussion with group members.

Evidence development and application to refine understandings of when placement capacity does and does not ‘work’

Realist studies focus on the logic of why something works, or does not work, in particular settings. The overarching project objective was to select/curate, develop and apply evidence to increase placement capacity. We started this process by using literature and expertise to draft five logical mechanisms that enable allied health student placements (table 2). We called these logical mechanisms ‘initial program theories’; and once developed we used the other forms of evidence throughout the project to test and refine them.

Table 2 Mapping of evidence to program theory development

Evidence	Key questions to guide program theory development and refinement
Environmental scan of literature	What seem to be the logical mechanisms that mean placements ‘work’?
Expertise and experiential knowledge	Which influences on placement capacity require a formalised, current, or usable evidence base? How is the student learner positioned within the plural and sometimes conflictual contexts and mechanisms underpinning placement capacity?
Development of five initial program theories	
Accreditation analyses	What promotes and limits the way placements are undertaken across disciplines?
Policy review	How are placements positioned within allied health policy documents specifically; as well as within policy for like workforces (i.e. medicine) and similar positionings across ministries and sectors (i.e. engineering or social work)?
Focused literature review	How does contemporary, empirical evidence for placement capacity support or challenge the program theories? To what extent do the program theories translate across different contexts, settings and professions in relation to placement capacity?
Revised program theories – capturing mechanisms of placement capacity	
Survey	What agreement is there for the identified mechanisms of placement capacity, across key sectors, agencies and

	representatives that are involved with student placements? What is missing?
<p>An evidence-derived understanding of placement capacity as an adaptive system that is interconnected with multiple other systems.</p> <p>This juncture enables the evidence to then be synthesised and applied to form recommendations – which are theories of change.</p>	
Project Advisory Group targeted feedback	What are gaps, silences or potentially unintended consequences of the evolving program theories and recommendations in relation to the current and future landscapes of allied health placement capacity?

Synopsis of current allied health placement capacity building landscape

To identify mechanisms to enhance placement capacity, a foundational understanding of the current landscape of allied health education, service provision and governance (i.e. accreditation and policy) was required. This was developed at the outset of the project using (1) the team’s expertise and working knowledge of factors which promote and limit placement capacity, which were consolidated and expanded on via (2) an environmental scan of the literature regarding influences on placement capacity. The diverse experience of the team members within placement system/s supported a comprehensive approach while safeguarding against potential oversights in the project’s execution.

Environmental scan of literature to understand mechanisms of placement capacity

The aim of the environmental scan was to inform the development of initial program theories for building allied health placement capacity. While it is recognised that a realist approach can include what works *and* what doesn’t work, we deliberately undertook the environmental scan to explore what *has* worked in a variety of different contexts, as barriers to placement capacity are well documented. We focused our environmental scan on systematic and scoping literature reviews, with hand searching of reference lists from relevant reviews.

Sixteen review articles related to health professions practice-based education were initially identified by project team members familiar with the literature, which was supplemented by a targeted review scan. Articles identified were individually reviewed and analysed to extract potential CMO statements. This process identified that most studies included within the reviews, reported on outcomes related to student learning and experiences in placements, placement supervisor experiences and/or teaching and learning processes. Four of these reviews identified placement capacity as an outcome.

Hand searching of reference lists from the above reviews identified a further 17 articles with a potential outcome of placement capacity. These articles were explored further to create “If- Then- Because” statements across the dataset of studies, which elucidate the logical mechanism that underpins change. An example of the content of one IF- THEN- BECAUSE statement, derived from analysis of the literature scan, is included here:

IF	THEN	BECAUSE
Practitioners have organisational support through protected time to actively engage in educator CPD	There is more openness to new models of placement capacity building	Practitioners have increased confidence and competencies in managing challenging student situations.

Fifteen of these statements outlining logical mechanisms of placement capacity were developed, and then the statements were analysed to produce four initial program theories:

PARTNER: If universities and service providers partner to co-develop placement/s together, the placement can be designed to meet the needs of both parties because of a shared understanding of each other’s priorities and drivers **(M1)**, shared enterprise and endeavour **(M2)** and the development of a reciprocal relationship **(M3)**.

CULTURE: If a learning culture is established within and across organisations, then placements are valued and embedded within practice and policy, and sustained over time, because value in learning and workforce development is prioritised **(M1)** and modelled for all **(M2)**.

INVEST: If universities, service providers and communities invest in student education, then placement capacity is enabled because of dedicated time **(M1)**, space and resources **(M2)** and supervisor access to professional development and capability development **(M3)**, and this models that student placements are a priority **(M4)**.

SUPPORT: If students and supervisors are provided with quality supports (including; supervision, professional development and capability development) then quality outcomes for all are improved, because students and supervisors have increased agency **(M1)** and capabilities for more complex, responsive learning and outcomes.

Following extraction and initial analysis of the accreditation data, four additional CMO statements were developed. These statements were reviewed by the broader project team, and through revisiting findings from the literature scan and for resonance to the four existing initial program theories. The fifth statement addresses the complexities of confirming student competency in relation to models of supervision, service provision, population needs, and curriculum design – which are all evolving at different rates.

TRUST: If accrediting bodies trust universities to demonstrate student readiness and competency for professional entry, then placements can be developed that meet community needs because there is less need or requirement for prescribed placement inputs **(M1)**.

The five program theories were presented during the first PAG meeting and were well supported as starting points to inform evidence development and refinement. Together, these theories form the basis of evidential inquiry and synthesis throughout the remainder of the project. We have provided worked examples in supplementary files of how these statements were iteratively refined throughout the project.

Realist methods seek to unpack: what works, for whom, in what circumstances. There are clearly contextual features to ‘what works’ and ‘for whom’ depending on which circumstances are being considered. Within the project, in order to develop logical pathways for influence that could be applied across the allied health workforce, we have sought to develop mechanisms that work in as many contexts and for diverse population groups to the extent that this is possible: because this reflects the wide reaching settings of allied health professions and practice.

Refining the Program Theories: Accreditation, Policy and Evidence Analyses

The accreditation analysis, focused literature review and policy analysis occurred concurrently, interfacing through the iterative refinement of the program theories. The survey results then allowed testing and further refinement of the program theories. Our recommendations were drafted in response to the evidence-based assessments of mechanisms that would support placement capacity. The initial program theories were shared with the Project Advisory Group during our first meeting, as well as the refined versions (middle and final meetings). The draft recommendations were presented and discussed with the Project Advisory Group in our final meeting, with feedback considered and reconciled within the final versions documented here.

Accreditation analysis

Broad objectives:

1. Map how accreditation and relevant regulatory or certification structures influence allied health placement capacity.
2. Identify the minimum placement requirements of allied health professions to meet regulatory requirements.

Approach and Findings:

A total of 94 accreditation related documents across 19 disciplines (elaborated further in Appendix 3 and 4) were reviewed. A broad range of data related to placement capacity was extracted to determine ways accreditation requirements impact allied health placement capacity. Findings about ‘promoters’ and ‘limiters’ of placement capacity were presented at Project Advisory Group Meeting 2. Iterative analysis of the accreditation documents led to the development of the IF-THEN-BECAUSE (CMO) statements, with three interacting categories identified as the most salient catalysts for addressing placement capacity (Figure 1).

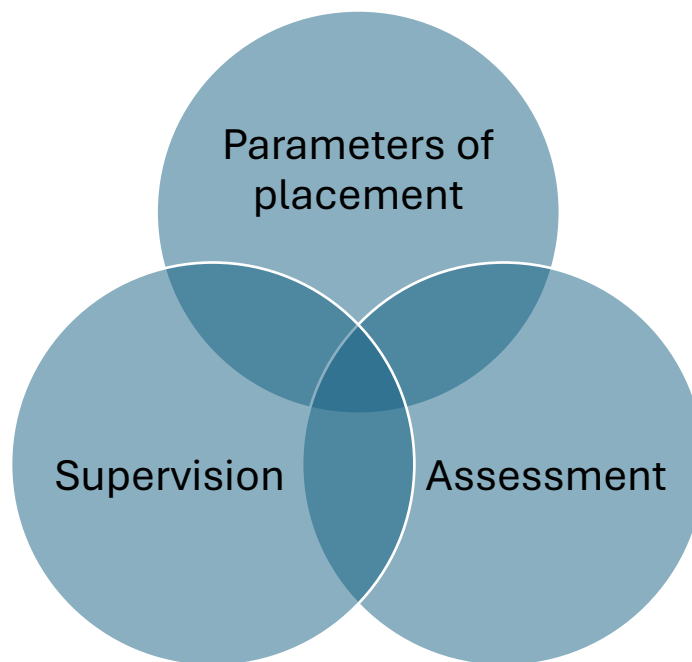


Figure 1 Significant catalysts for addressing placement capacity

By considering the three IF-THEN-BECAUSE statements in Table 3, we can see how parameters of placement, assessment and supervision are all catalysts within their own right, but also interrelate with one another.

Table 3 If-Then-Because statement exemplars for parameters of placement

PARAMETERS OF PLACEMENT		
<i>Includes all requirements (either numerical or descriptive) that 'define' what is or isn't considered to be a placement. For example, required hours, types of practice contexts, required placement experiences, placement types, such as high-fidelity simulation or project placements.</i>		
If	Then	Because
placement accreditation standards specify what students are expected to do commensurate with professional competencies (i.e. applying outcomes-based ⁽¹⁾ rather than input-focused ⁽²⁾ approaches	flexibility in determining placement parameters is afforded	a focus on demonstration of competency rather than specific input-focused placement requirements enables a responsive, sustainable approach to placements that attends to local needs.
ASSESSMENT		
<i>How student learning outcomes are assessed and by who.</i>		
IF	THEN	BECAUSE
student placement assessment tools are both co-designed and evidence-informed	placement capacity is optimised	the utility and feasibility of the assessment process meets supervisor needs and enables students to demonstrate achievement of learning outcomes.
there is acknowledgement that competencies vary in level of risk to the public and complexity		the evidence of students' achievement of learning outcomes can be derived from a range of assessment data sources including from other registered or qualified professionals with adequate preparation to assess the student's achievement.
SUPERVISION		
<i>The requirements and expectations of both the supervisor and the teaching/learning and assessment processes</i>		
IF	THEN	BECAUSE
supervision requirements are evidence-informed,	placement capacity is optimised,	varying models of supervision can be utilised by appropriately qualified health professionals.

Note:

(1) Outcome-based approaches emphasis outcomes such as achievement of competencies

(2) Input-focused approaches encompass specific requirements that are time-based (e.g. total hours) or type

based (e.g. placement duration, types of clinical experiences) (Woods, 2017).

Synthesis to the Program Theories

Our review of accreditation standards reveals that regulatory authorities (both AHPRA and independent bodies) have adopted diverse approaches to developing their standards, with these approaches evolving over time. In general, and in alignment with current national and international perspectives (PhillipsKPA, 2017) the standards related to overall curriculum design and delivery have or are trending from input-focused¹ towards being outcome-based² (Table 4) (PhillipsKPA, 2017; Woods, 2017). However, most professions have supplementary documents in addition to the accreditation standards that specify or further outline the regulatory authority’s expectations regarding the design and delivery of the placement components of the degree. Our analysis identified that these supplementary documents often offer further ‘input-focused’ requirements adding further placement settings, or supervisory requirements that are not explicitly stated in the primary accreditation standards documents. A recurring challenge in analysis has consequently been the need to reconcile accreditation standards and supplementary documents with the diverse ways they may be interpreted and actioned by the respective regulatory authority, accreditors, the universities, the placement academics, the placement supervisors and indeed the profession as a whole who are engaged in the ongoing development, implementation and review of the standards. An example of this is the Australian Physiotherapy Council accreditation standards that are supplemented with a guideline for accreditation which provides specific input-focused placement requirements inconsistent with the outcome focused standards.

Table 4 Comparison of input-focused and outcome-based standards

Input-focused standards	Outcome-based standards
Total placement hours	Achievement of professional competencies
Placement duration	
Placement settings	Attainment of knowledge, skills and attributes required to practice
Clinical experiences	

Catalyst one: Parameters of placement

Our findings indicate that on a continuum from input-focused to outcome-based, the placement-specific standards and/or the further articulation of these tend, for most professions to be more towards input-focused, reflecting historical approaches to accreditation that used inputs and resources as the assessment criteria (PhillipsKPA, 2017). In a recent federal report, Woods argued there is little evidence equating time served with achievement of learning outcomes and that hours required are often arbitrarily decided, being used as a proxy for achievement of learning outcomes (Woods, 2017). Indeed, input-focused standards have been found to impede flexibility and thus responsiveness to community needs, technology or other service delivery innovations (Ferns et al., 2021; Woods, 2017). Impeding flexibility and responsiveness is a limiter of placement capacity.

Catalyst two: Assessment

We found significant variation in assessment requirements across disciplines. There is also some variance in who is ultimately responsible for determining student's achievement of learning outcomes (i.e. assessment of performance and determination of final grade). For some disciplines, assessment of competence is the responsibility of the university (for example, Dietetics), for others, such as occupational therapy or physiotherapy, it can only be a registered professional from the same discipline, while others, such as exercise physiology allow for student assessment from another discipline. If the assessment requirements are more flexible, this potentially creates a larger supervisor pool available to assess attainment of competence. In turn, this may increase the number of placements offered (placement capacity). This aligns with findings from the literature review, where various studies demonstrate that alternate supervision models, supervisor support and training can enhance placement capacity through improved supervisor capability.

Catalyst three: Supervision

Accreditation documents across a wide range of professions restrict student supervision to a registered practitioner from their own discipline. This impacts placement capacity by preventing the development of innovative and interprofessional supervision models. The health workforce scope of practice review final report (Department of Health and Aged Care, 2025) calls for the removal of unnecessary barriers to cross professional supervision of students in primary care placements. The review recommended accreditation standards be reviewed, to facilitate interprofessional supervision in primary care.

Considering accreditation requirements in relation to contemporary placement needs:

What is clear is that where input-focused standards exist, these in some situations can and do drive placement capacity – i.e. the universities are required to invest in supporting placement capacity through various strategies/mechanisms including payment for placements, but conversely these specific requirements, especially where there are workforce shortages, impact on placement capacity and potentially hinder students progression towards the achievement of their degrees. An example of where specific requirements were adjusted was during COVID-19, where creative solutions were developed by the universities and approved by the accrediting bodies. Solutions included student placements being in the telehealth environment, were previously it was expected that all placements would occur in the same environment as the supervisor.

The impact of these input-focused standards therefore is more influential than perhaps was anticipated or is appreciated at the time of development. The standards are reviewed approximately every five years, therefore as practice changes rapidly, a standard that is initially an enabler of placement capacity, could become a barrier at some point in the accreditation cycle. In other words, accreditation standard and review can at times be 'out-of-step' with workforce developments. This is more likely to occur where standards are input-focused rather than output-based which we have argued allows for more flexibility in the design and implementation of placement models. This apparent

disconnect has also been identified in the Australian Government Department of Health and Aged Care (2024) review of complexity in the National Registration and Accreditation Scheme with a clear point made that “health practitioner regulation must keep pace with and support workforce strategy” (Department of Health and Aged Care, 2024, p. 4).

Our accreditation standards review has reinforced previous findings (Penman, et al., 2023. Woods, 2017), that accreditation standards can impede flexibility and innovation in both placement as well as curriculum design. How findings from the accreditation analysis further contributed to the synthesised results will be discussed later in the report.

Policy review

Policy is a critical influence on the way in which systems of placement and workforce are organised and resourced. Policy sets up expectancies between roles, relationships, and central tasks (Foley et al., 2024) - which then unfold through interdependencies in experiences and structures vis a vis diverse service and industry contexts (Foley et al., 2021; Attrill et al., 2023). The realist methodology enabled the exploration of policy to see how placement education and workforce development are conceptualised within policy, procedural and guidance documents aligned with allied health and aligned professions. The value of understanding these policy positionings is that it illuminates how policy sets the context/s in which placement education takes place and how this context interacts with workforce development. Gaps within policy – and differing positionings in differing policies are also elucidated and can be useful to understand tensions and frictions that occur in and around allied health student placements (Meyer & Lunnay, 2013). Combining the policy review findings with the evidence from other project activities illustrates how placement education is operating in practice. This enables recognition of gaps between policy, industry and placement realities, which assists to examine how the vision of policy relates to its implementation – which in turn enables advocacy to reduce or address implementation gaps.

Broad objectives:

Use policy documents and realist inference to:

1. Explore if/how current and/or future allied health education requirements or workforce are present in a diverse suite of policies and position statements of allied health sectors.
2. Seek exemplars from other systems, including education, medicine and nursing, to utilise as divergent cases to better understand education and workforce positioning within spaces of allied health.
3. Examine what openings there might be within funding/resourcing bodies to support the allied health placement capacity within the complex systems of allied health.

4. Use data to further refine and elevate the program theories and how they might apply across the ministerial portfolio areas germane to allied health and what this means for allied health placement capacity, e.g. via further integration with the accreditation findings.

Approach and Findings

The search strategy aimed to capture the breadth and diversity of the policy space, adopting purposive sampling to ensure richness in understanding. A university librarian cross-checked identified search terms and these were supplemented with targeted searches of the Policy Commons and the Australian Policy Observatory. An initial analysis of 10 policies served as proof-of-concept in relation to refining theory.

A sample of 62 policies and statements encompassing general, rural, medical, education, engineering, national workforce, and allied health targeted policies was then iteratively searched and analysed. We synthesised this information to explore potential funding avenues for allied health placements. To progress this exploration we:

1. Analysed existing allied health policy and position statements to investigate if there is funding allocation or assumption for student placements; and then
2. Explored the way student placement funding is configured within other professions that are located prominently within one ministry/sector (e.g. medicine, nursing which are prominently situated in the Health portfolio, and teaching which is prominently situated in the Education portfolio) and across multiple ministries/sectors that are similar to the positioning of the allied health professions (e.g. engineering).

This enabled us to:

3. Understand how allied health student placements might be funded across ministries, portfolios and/or sectors; and
4. Outline recommendations to strategically work towards these objectives.

Allied health evolution and advocacy (n=21)

Policies and position statements identified opportunities to expand the allied health workforce by enabling access to allied health services via diversifying funding streams. The need to attend to allied health workforce generally, was noted within documents:

- The Allied Health Professions Association argued that the allied health professions remain undervalued and under-utilised within government policy and practice (Allied Health Professions Association, 2025).
- The Independent Health and Aged Care Pricing Authority (2023) recommends the Commonwealth take action to retain and support a strong and sustainable allied health workforce including appropriate remuneration, career pathways and supervision/training opportunities.

- The private sector has limited access to workforce funding (Private Healthcare Australia, 2024) – and challenges establishing placement activity and growth in the private sector across the allied health profession reflects this funding reality.
- Funding allied health professionals in primary care; in ways which do not reduce flexibility of their roles – has been identified as an important balance between material support and role flexibility, that can support allied health workforces to meet population needs (Bange, 2023).

Placements as a pipeline to workforce development

Whilst a range of factors related to addressing allied health workforce issues were identified in our review, these rarely included considerations around allied health student education nor the experiences of students while on placement, as noted by the National Rural Health Alliance in their ‘Allied Health Workforce in Rural, Regional and Remote Australia’ position statement (2019):

A lack of funding for allied health jobs, career pathways and professional development opportunities are some of the additional challenges facing the allied health workforce sector.

Policy documents that referred to allied health workforce preparation, development or readiness do not distinguish the placement component of entry-level allied health education programs from general training and development that might be undertaken. This may be amplified by current attention to allied health workforce shortages, that detract from addressing future workforce developmental needs. This is illustrated well by the lack of detail about ‘pressure points’ that constrain allied health student training within the most recent National Allied Workforce Data Gap Analysis (2022, p. 8):

Considerations of how long [for student training] requires an understanding of sources of supply (university entry and completion, clinical placement, immigration), and any pressure points that may exist...

Similarly, placement education is left out of the key recommendations made by Queensland Health in their ‘Allied Health Service Critical Framework’, with the only mention being within a critical reflective exercise for providers to think about how they might support recruitment to their organisation; rather than within a broader workforce ‘pipeline’ (2024, p. 25):

What strategies does the team currently use to build the workforce ‘pipeline’? That is, how are current and future health professionals exposed to the work of the team and encouraged to seek employment in the service? (e.g., clinical placement activity, traineeships and cadetships, graduate positions, rotations and secondments)

The Speech Pathology Australia ‘Workforce Analysis’ (2023, p. 25), while focusing specifically on ‘preparing for the future’, only mentioned student placements with respect to pandemic impacts on work readiness:

Impacts to student placements resulting from the pandemic meant that students – and current new graduates – might have lower work readiness and therefore success in practice

While this infers retention and continuity are important parts of the workforce pipeline, it does not conceptualise pre-graduate practice as part of the ‘workforce’.

The relative absence of student placements within workforce policies (i.e. only 8/21) suggests that allied health student placements, and the pre-entry education requirements more broadly, are not strongly positioned within workforce planning amongst the allied health professions.

Expectations on providers to facilitate placements without specific resources to enable this

Placements were mentioned in less than half of the allied health workforce policy and position statements analysed (i.e. n=8/21).

Recognition of allied health education and training more broadly was inconsistent, and did not distinguish placement from other education and training activities that happen at universities. This lack of specificity in relation to placements meant that responsibility and resourcing for placement was not positioned in the documents analysed. Health workforce development was recognised within some documents as an important professional contribution and responsibility:

All health practitioners have an important role to play in supporting the development of the health workforce (Ahpra and National Boards Code of Conduct. June 2022). Clinical placement supervisors are critical in this regard, and need the knowledge, skills and professional attributes to support good clinical practice as well as the ability to provide teaching, supervising and mentoring to students. (AHPRA accreditation committee, 2024)

Availability of supervision tools and training, and the presence of a learning culture within the allied health professions was suggested in some documents as facilitating placements. While acknowledging the important contribution of these, this positioning risks minimising the necessity for specific resources to support placement capacity, including through the funding of supervision time, and supporting appropriate access to supervision training and professional development. :

Maximise learning opportunities through the development of structures, processes and tools that support learning, teaching and continuing professional development of Allied Health professionals in the workplace, including building the skills of Allied Health clinicians in the provision of education to others (e.g. effective use of simulation, use of technology to support patient education) and research skills. (Sydney Local Health District, 2020)

We did not find evidence in any policy of a plan or framework for how these time-intensive inputs would be funded, only imperatives that they should be funded:

Funding and policy levers should reflect that teaching, supervision and mentoring is a skill that requires development and investment of time and of resources. (Rural Victoria Workforce Agency, 2024; p. 1)

... students on practical placements are not able to provide hands-on treatment to patients if the latter are being treated under Australian Government funding schemes (eg Medical Benefits Scheme, Department of Veterans' Affairs) or via private health insurance (eg Medibank, HCF). (AHPA, 2023, p. 12)

Similar professions and/or like ministerial positionings

In workforce policies that extend beyond allied health, the future workforce is centralised as a way of supporting the current workforce in real-time and to meet projected workforce transitions. For example, meeting projected demands and contemporary expectations of career change (Australian Government Treasury, 2023); and improving teaching supply and strengthening classroom-ready graduates (Australia Department of Education, 2022).

When the future workforce is considered in broader workforce policy, new opportunities are opened to strengthen the natural flow between the two systems. For example, a positive correlation is identified between students spending longer time on placement in rural locations and deciding to work in a rural location (National Rural Health Student Network, 2019) and the National Ageing Research Institute acknowledged that future and established workforce could be structurally organised to operate together in meeting the evolving needs of an ageing population (National Ageing Research Institute, n.d.).

In the allied health policies and position statements (n=12), education and training are recognised intermittently in workforce documents. Related information does not specify the nature, requirements or ownership for allied health placements, and specific consideration of the resource-intensive nature of placements is lacking. The resources that support allied health placements, including costs, and resources related to training, support and supervision are not described. However, the Independent Health and Aged Care Pricing Authority (2023) has recommended the Commonwealth take action to retain and support a strong and sustainable allied health workforce including appropriate remuneration, career pathways and supervision/training opportunities.

Documents related to workforce preparedness or readiness do not distinguish the placement component of entry-level allied health education programs from general training and development that might be undertaken. This may be amplified by current attention to allied health workforce shortages, that detract from addressing the developmental needs of allied health students.

As ownership and accountability for allied health education requirements were not visible from our policy review, we surmise that this reinforces higher expectations on local allied health practitioners and practices to support student placements and related pre-qualification education and training (i.e. per provision of quality supervision (AHPRA, 2024). Positioning the responsibility for placement education more clearly as a future

allied health workforce mechanism may enable new opportunities for sharing resources, knowledge and expertise to develop sustainable and innovative placement models.

Funding and co-benefit models

Explicit funding information regarding placement education was not always apparent. The model for general practitioner training in Australia provides a useful case study for exploring how time involved in providing supervision to student doctors is financially viable, enabling medical clinics to maintain placement availability. The 'Practice Incentive Program' payments are offered by Services Australia to provide a range of financial incentives at practice-level that could be used to cover some of the time incurred by placement supervision.

In addition to these 'teaching payments' - that sit within the capacity stream, general practitioners can access additional incentives if they target their services to areas of population demand (i.e. Indigenous Health Incentive, where payment is contingent on service provision for chronic disease or 'mental disorder') or workforce need (i.e. Quality Improvement Incentive, whereby practices receive payment for collecting and reviewing practice data). It is not stated within the document that students cannot be involved in either of these activities; so they may run as parallel opportunities to accrue funding to the practice that offset the time invested by the practice in releasing trained practitioners to oversee student learners.

Incentive amounts and scenarios:*

Teaching Payment: \$200 per session, where each GP can claim payment for up to 2 sessions per GP per day (regardless of how many students participate). Eligibility criteria exist, but do not preclude that teaching could involve provision of medical care that is largely undertaken by the student under supervision.

Indigenous Health Incentive: \$1,000 registration per practice (once off, as agreement to undertake specific activities to improve provision of care for Aboriginal and Torres Strait Islander patients with a chronic disease or mental disorder); then between \$100-\$300 per particular 'outcomes' (e.g. a GP management plan or a target level of care).

Quality Improvement Incentive: \$5.00 is paid to practices per whole patient dataset shared, capped at \$12,500 per quarter.

**(available via [Types of Practice Incentive Program payments - Health professionals - Services Australia](#), 28th February 2025). The eligibility criteria also state that practices can still access these payments if they get payments or support from third parties funded by the government; and in addition to payments from a state or territory government. In addition, a rural loading can be added, which varies on the remoteness of the practice.*

This example, drawn from medicine, chiefly located under the ministerial health portfolio, shows multiple funding sources are accessible for resourcing and supporting placement-education of medical students. It is more difficult to identify such supports for workforces that are spread across ministries; for example, with respect to engineering, we could not

retrieve any examples of financial support towards placements (i.e. paying a placement provider). Supports are clearly apparent, for example University of South Australia identifies access to dedicated learning hubs; and frame the provision of Course Coordinators, Project Facilitators and Academic Supervisors as assets (University of South Australia, 2025). Benefits for placement providers were framed as enabling industry partners to “assess future talent while having students assist during peak periods, providing a fresh perspective with new ideas.” While allied health providers have been identified as recognising these kinds of benefits from student placements, the regulatory responsibilities and time-intensive nature of supervision – to fulfil these responsibilities – act to constrain placement capacity.

Current funding models that traditionally focus on supporting general practitioners and other medical specialties should increasingly expand to offer more support to the allied health workforce. This will contribute towards overcoming systemic challenges facing people living in rural Victoria from accessing care by increasing the holistic management of their health needs... Health professional training, education and credentialing should be accessible and equitable across health professions. (Rural Victoria Workforce Agency, 2024; p. 1)

Focused literature review

Broad objectives:

In line with a realist methodology and based on findings from the environmental scan and synthesis of published reviews, a focused review of the literature was performed between November 2024 and January 2025 (Pawson et al., 2005; Honsou et al., 2025). This focused literature review expanded on the earlier environmental scan of the literature (which included reviews) by reviewing recent empirical research on interventions targeting placement capacity. The focused literature review aimed to test, tighten and refine the program theories developed through the environmental scan against a wider evidence base. Drawing on a broader body of evidence to understand CMO statements enabled the program theories to be evaluated for translatability across contexts, settings and professions to determine what specific placement capacity interventions work, for whom, and in what circumstances (Pawson et al., 2005).

Approach

We employed a purposive sampling strategy, combining database searches with hand-searching of primary source articles. A multi-database search using terms relating to each IPT and placement capacity (across allied health, medicine, nursing and midwifery) retrieved 1707 articles. We searched for relevant literature from medicine, nursing and midwifery to identify evidence that might translate to allied health contexts. The literature search resulted in 36 studies included (see appendix 5 for the PRISMA flowchart outlining this process and inclusion criteria for the study).

Findings

In appendix 6, we have summarised the characteristics of each of the 36 included studies. Studies were primarily conducted in the United Kingdom, United States of America, Australia, and Canada, with one study based in the Democratic Republic of Congo. Literature came from a range of disciplines, most studies reporting on placement capacity interventions within nursing or nursing and midwifery (n=16). Three studies reported on medicine. For allied health, studies specifically identified the following disciplines: occupational therapy (n= 2), physiotherapy (n= 5), social work (n= 4), pharmacy (n= 4), speech pathology (n= 2), dietetics (n= 2), radiography (n= 1) and genetic counselling (n=1). There were also two studies that reported on allied health generally without specifying discipline. Some studies were a combination of these professions. Most studies did not specify a location (n= 24). Where specified, studies were most often undertaken in rural settings (n= 6) and in hospital settings (n= 12).

Where specific interventions were used to successfully increase placement capacity, these included;

- Alternate placement models: including alternate supervision models and student led services (n= 14);
- Formal partnerships: between university and community, or university and practice setting (n = 6);
- Enhancing supervisory support: through uptraining or the introduction of a new role (n= 5)
- Course/curriculum changes: such as placement promotion, organising and program auditing (n= 2)

Other included papers (n= 5) explored perspectives and insights (such as through roundtables and surveys) and were included to contribute to validating the “real world relevance” of the program theories (Honsou et al., 2025). While these papers did not present specific evidence of interventions targeted towards placement capacity, they provided an important perspective on how those involved in placement interpreted capacity challenges, and how they envisioned these changes could occur.

Data from included studies were synthesised to form additional CMO statements. Like Maddock et al. (2023), we explored both positive and negative configurations to broaden our understanding. Team discussions contributed to further refinement of the theories, and information from the aligned accreditation and policy reviews were integrated. Analysis also focused on differences between the included studies to ensure we understood how different interventions were related to specific contextual factors (Pawson et al. 2005). We examined these findings in relation to the initial program theories, which were subsequently refined prior to the launch of the realist survey, which formed our final data source.

Workforce development was identified within the literature review, though this was predominantly spoken about as a discussion point rather than as a direct finding or aim of the interventions towards placement capacity. Both international evidence (Hay et al.

2024; Li et al. 2022; & Cygan et al. 2018) and some Australian studies (see Johnson and Wakely, 2020; McBride et al., 2020) suggests efforts to increase placement capacity have potential to address workforce challenges by alleviating staffing shortages, creating employment pipelines and directing/influencing the location choice for newly qualified graduates (specifically in rural contexts). These findings spanned allied health and non-allied health disciplines. Across the disciplines, the connection between workforce and placement was positioned as a consideration for future research, or as an ‘added benefit’, rather than as primary outcomes of the interventions being reported on. Further ways that findings from the focused literature review contributed to the synthesised results will be discussed later in the report.

Survey to key participant groups

Broad objectives:

1. To enable timely evaluation of emerging program theories through the lens of direct, operational experience
2. To collect current and diverse practice-based insights (in the form of case studies) related to placement capacity as a means of ensuring theories and subsequent recommendations remain responsive and grounded in the realities of placement
3. To identify policy or procedural documents that are gaps or missed from our review. This may be particularly related to localised policy that is less likely to yield through the existing search strategy.
4. Further refine the program theories.

Approach and Findings

The survey was developed within Qualtrics and piloted with both the Project Advisory Group and select representatives from Griffith University, who are members of ACDHS and are external to the project team. Following piloting, and subsequent ethics approval, we ran the survey from early December 2024 to late January 2025.

The survey garnered 171 responses, with the majority reporting being in a placement supervisor (n= 67) or placement education coordinator (n= 50) role. A summary of the characteristics of respondents has been provided in appendix 7. The majority of respondents reported working within the university sector (n= 123). Multiple sectors and roles were able to be selected during the survey.

Within the body of survey (and during meetings with the Project Advisory Group), we attempted to limit bias by seeking feedback on ways theories could be disproven, modified, or challenged, rather than only seeking affirmation of their relevance (Hounsou et al., 2025). The majority of respondents agreed that program theories 1-4 aligned with their understandings of placement capacity. Questions related to program theory 5 had less responses overall, and a higher number of participants reporting ‘somewhat’ agree than ‘agree’. These results are discussed further below.

Testing and Refinement of the Program Theories via the Realist Survey

Having provided an overview of the approach and findings for each of our data sets within the project, this section showcases the revised program theories. Program theories were further refined based on the evidence from the accreditation, policy and focused literature analyses before being presented in the survey (as described earlier). Participants indicated to what extent each program theory aligned with their understanding of allied health placement. Where survey respondents did not agree, or only somewhat agreed (noting that the general agreement with all program theories was quite high), respondents were asked to provide qualitative responses that represented their concerns. Broadly, these responses highlighted the complexity and interactivity of each program theory with others. Moreover, the responses identified the need for program theories to be conceptualised as interactive components of an adaptive system (as discussed later). Table 5 presents the refined program theories, with changes bolded to demonstrate how data analyses and interpretations contributed to deepening our understandings of placement capacity. Each program theory is then described in detail below.

Table 5 Process of refining and testing program theories

Initial program theory (presented in survey)	Testing from survey	Refined program theory (presented to PAG in Feb 2025)
If universities and service providers partner to co-develop placement/s (models), then placements are designed to meet the needs of both parties because of a shared understanding of each other's priorities and drivers (M1), shared enterprise and endeavour (M2) and the development of a reciprocal relationship (M3).	Agree: 74%	If there is a multi-sector approach to placements, and universities, service providers, and communities partner to co-design placements, then placements can be developed to meet the needs of all parties because this facilitates a shared understanding of each other's priorities and drivers (M1), shared enterprise and endeavour (M2), the development of a reciprocal relationship (M3), and regular review and nurturing by all parties (M4) .
	Somewhat agree: 25%	
	Do not agree: 1%	
If a learning culture is established within and across organisations (universities and service providers) then placements are valued, embedded within practice and policy, and sustained over time because all parties see value in prioritising learning and workforce development (M1) and model this for all (M2).	Agree: 71%	If learning culture is systematically embedded (through formal structures, collective approaches to supervision, demonstrated investment, and data-driven improvement), then placements become integrated into core service delivery rather than being viewed as an additional responsibility, because the value extends beyond individual organisations to workforce and community outcomes (M1).
	Somewhat agree: 28%	
	Do not agree: 2%	
If universities, service providers and communities invest in student education, then placement capacity is enabled because of dedicated time (M1), space and resources (M2), and supervisor access to professional development and capability development (M3) and this models that student placements are a priority (M4).	Agree: 71%	If universities, service providers and communities consider investment in student placements to be inclusive of relational, structural, temporal and/or financial investment , then placement capacity is enabled because of dedicated time (M1), space and resources (M2) and supervisor access to professional development and capability development (M3), an explicit commitment to sustainable growth of placements (M4) , and this models that student placements are a priority (M5).
	Somewhat agree: 23%	
	Do not agree: 5%	
If students and supervisors are provided with quality supports (including supervision, professional development and capability development), then quality outcomes for all are improved, because students and supervisors have increased agency (M1) and capabilities for more complex, responsive learning and outcomes.	Agree: 82%	If students and supervisors are provided with quality supports (including supervision, professional development and capability development), then quality outcomes for all are improved, because students and supervisors have increased agency (M1) and capabilities for more complex, responsive learning and outcomes.
	Somewhat agree: 18%	
	Do not agree: 0%	
If accrediting bodies trust universities to demonstrate student readiness/competency for professional entry, then universities can partner with key participant groups to develop placements that meet (local) community needs, because there is less need for prescriptive placement inputs.	Agree: 32%	If there is mutual understandings between professions, their accrediting bodies and universities, informed by evidence about placement to enable student readiness and competency for professional entry, then placements will be developed that meet community needs because there is less need or requirement for prescribed placement inputs (M1).
	Somewhat agree: 44%	
	Do not agree: 24%	

Evidence-informed revisions to program theory: PARTNER

Initial program theory development highlighted the partnership between universities and service/placement providers. The policy review however demonstrated the multi-ministerial positioning of allied health, which requires a more multidimensional and inclusive approach to partnerships for placement capacity. The broad-reaching concerns of allied health placement capacity are not only inter-agency nor only provider-university; nor are they static or linear. This reflects the broad remit of allied health professions and professionals: working flexibly in ways which reflect the strengths and distinct needs of communities they work with. With these principles as orienting directions for professionals, potential partnerships for supporting placement capacity are located in several ministerial portfolios (Department of the Prime Minister and Cabinet, 2024), including (but not necessarily limited to):

- Health and Aged Care
- Education
- Defence
- Social services
- Industry, science and resources
- Employment and workplace relations

The extent to which partnerships are enabled or limited in relation to placement capacity is underpinned by policy and the way that policy interfaces with funding models. Allied health service provision adapts to possibilities and opportunities within the funding landscape; which may also be distinct across the specific professions of allied health. Survey respondents viewed reciprocities with partners as critical for partnership:

“Any initiative that is co-developed will be more likely to succeed because both parties will be invested in the program”

“Co-development with an understanding of both parties' needs and priorities can allow for the placement to be developed over time collaboratively to optimise the outcomes of placements”

“Ensuring placements meet student and supervisor requirements will ensure placements are sustainable.”

The initial program theory presented during the survey was well supported (see table 5). However, perspectives of those working within placement systems who identified only “somewhat agreeing” with the theory highlighted aspects that were not captured in the theory statement: expanding the idea of partnership to multi-partnership, the need to align placement requirements and allied health workforce demands, as well as sustained investment and resourcing.

Our findings indicate partnerships support placement capacity in three ways. First, the creating of ‘bespoke’ placement models designed specifically for different contexts and

community needs (Collett, Fraser & Thompson, 2019). Second, by implementing adaptable partnership arrangements (Li et al., 2022) including partnered project work (Haralambous et al.). Third, by establishing, maintaining and prioritising regular and systematic review and refinement processes (Cygan et al., 2018). The need for flexibility within partnerships was also identified in the survey data:

“Currently, placements are very stagnant with little change happening in the OT placement space even though the work scape has changed dramatically. Supervision has never been more intensive with supervisors having to up skill students in area’s universities deem not appropriate to the course work due to the nature of the changing work landscape. I.e., community based practice skills for working on the go, being flexible in approach etc. We call these ‘soft skills’ that more than 50% of the students I’ve worked with in the last 2 years find challenging to work towards and don’t appear to be included in current university teachings”

Given that service provision, community priorities, and student needs are not static, placement models need to be tailored to specific contexts and regularly reviewed and adapted as needed. Innovative placement planning that is multi-partner and designed to meet mutual needs, however, can yield unintended consequences and this was prominent within our findings from the accreditation analysis. For example, multi-partner approaches must be considered in relation to how placement models reflect input-focused accreditation statements (e.g. time, setting or population boundaries).

This example also warrants consideration of ‘who’ the partner is, and who might be excluded from this vision of ‘partnership’:

“This will lead to student placements that meet the needs of the students, unis and workplaces. This does, however, take time to do well and is often not planned for or undertaken formally, rather relying on informal relationships”

Innovative, flexible and sustained partnerships present demands to the university sector which are potentially unfamiliar and challenging. Results from the focused literature review suggested that changes to governance structures and the maintenance of regular, open communication lines are key challenges (Brady et al., 2020; McBride et al., 2020); while internal university re-structures (administrative and academic) can enable innovation and partnerships (Halambouris et al 2024).

Respondents to the survey provided insights to what happens when partnerships have limited mutual understanding or reciprocity, such as divergences between university placement manuals/documents with regard to current practice requirements. Sole service providers of placement reported that investments to placements of money, time, resources and support felt one-sided at times – requiring much of the service provider and little from the university. Service providers reported the power differential between universities ‘dispensing’ placements and the resulting expectations of services to manage placements, as time-burdensome and unclear:

“goals of placement are often not clear and dependent on conversation between supervisor and student, rather than being university led.”

The need to partner, for this service provider, was linked with the capacity of placements to be fit-for-purpose and adaptive to the local context:

“There is an ongoing belief amongst some universities that placements that work well in metro areas are suitable to be replicated in non-metro areas. This isn't the case! There is also an ongoing belief amongst some universities that what worked well in previous years at a site will work again, and fail to understand the local contextual changes that have occurred.”

These dynamics within partnership are related to power – who has the power to partner and to what extent do structures, that are often not transparent to all partners, facilitate or constrain genuine engagement and mutual investment. This respondent, identified as from the university sector highlights this concern:

“Being on the university side of things I can appreciate this statement. But what is missing in reality is the willingness of the placement provider to actually co-develop. They have very unrealistic expectations of what the university is allowed or able to do. So, agree with the statement in theory, but much more challenging in reality.”

The role of the student was also foregrounded as a ‘partner’, whose needs and priorities are often not visible within high level frameworks of practice-placement education, curriculum design, and university-provider interactions:

“This partnership needs to be power sharing relationship with mutual decision making. Student needs need to be central to the placement design.”

These respondent perspectives include those of potential partners in the design of allied health placement models. The tensions between these perspectives point to placement partnerships as needing to encapsulate the entirety of the development, planning, execution and evaluation of allied health placements, with ‘partnership’ denoting relationships and actions between partners that move beyond historical transactional, didactic approaches to a genuine mutuality.

The need for equitable training opportunities across allied health professions has been identified by Rural Workforce Australia. The multiple jurisdictions across allied health disciplines adds a level of complexity not seen in other pillars of the health system, such as medicine and nursing (Department of Health, 2022). Because such changes also need to occur at a systems level (and move beyond purely operational change), advocacy for shared data transparency and reporting systems is required (e.g. McBride et al., 2020); testing of innovative placement systems itself will provide mutual benefits across sectors and contexts.

Evidence-informed revisions to program theory two: LEARNING CULTURE

Initial program theory development highlighted the importance of leadership, at all levels, for developing a learning culture that incorporates placements as part of the providers' learning system. For example, where placements are embedded as a

deliberate quality improvement strategy for the provider, this ‘embedding’ of learning culture can integrate placement activity to the systems level of organisations, fostering this to become part of usual business.

Evidence from the focused literature review suggests that learning culture extends beyond something that is established to something that is embedded through systematic formalisation within systems and sites. Documented policies, standardised resources, and regular evaluation processes help normalise student/placement presence and learning within organisations (Mackay et al., 2018; McBride et al., 2020). This extends beyond simply ‘establishing’ culture to maintaining and reinforcing it through formal structures – to create space for it to be something recursively and collaboratively “done”. Whilst the embedding of an organisational learning culture may be highly valued, this requires investment and resourcing and may be produced and reproduced through partnership, as noted by this respondent:

“The process of supervising, educating, and supporting students, along with managing the associated administrative workload, often becomes untenable. This challenge is unrelated to our learning culture—it’s about the practical constraints of balancing these responsibilities with the demands of running a busy practice. Recognising and addressing this burden through meaningful support or incentives for practices could make placements more sustainable without compromising the quality of the learning experience.”

Examples of more ‘systems-sensitive’ approaches that retain a learning culture range from traditional 1:1 supervision to team-based models (Masterson et al., 2021) and the integration of student-led services as valuable service delivery models (Brady et al., 2020). The synthesised data suggests that prescribing placement models (e.g. placements that must be designed for multiple students) as a means to increase placement capacity may not capture the contexts that underpin sustained partnerships, undermining long-term investment in placement capacity building.

Survey responses suggest that student supervision was not perceived as an individual provider/supervisor responsibility, but rather a shared, goal-oriented endeavour:

“If you embed placements with a focus on shaping the prospective workforce professionals, placements are viewed more positively.”

However, not all respondents agreed, and in some instances, responsibility was attributed to one entity. For example, the university sector:

“Placement sites don’t believe that it is their responsibility to train the students. They believe it is the responsibility of the university, and that they should arrive at placement with all the necessary skills.”

Service providers within the survey identified that a learning culture required material supports and investments at the organisational level, such as protected teaching time within workload planning, integration of dedicated supervision roles within and across university/service provider environments, into supervisory development and inclusion of supervisors within educational program development:

“Supervision of placement students needs to be seen as a two-way street for learning. Our students gain experience, but also our students may bring new learning and knowledge, as well as prior life-experience to a placement which could assist the development of the organisation.”

“They (placements) need to be resourced. Everyone understands learning is important - where it falls down is the crunch between your job KPIs, staffing and not allocating enough resources to train”

“this does not address staff burnout and overwhelming clinical load”

Respondents also tended to locate placements and student learning within a timeline of workforce development: linking student learning, skill development, and future workforce:

“Well designed placements are usually developed on a foundation of a shared sense of value in what students can give and receive during their placements, with settings seeing the return on investment in having access to a well trained future workforce.”

Some respondents further identified this as a benefit that circled back to placement providers, because they were invigorated by student learning and growth, and supporters of a future workforce rather than only within a service provision capacity:

“Need to value placements as our new workforce and protect the time to deliver placement opportunities which at times can seem onerous but by reframing to our next generation of well educated team members is an important workplace activity”

“When a learning culture is embedded in an organisation, student supervision and success becomes an important part of work satisfaction for all employees.”

When learning culture is built within a resourced organisational framework, allied health workforce development is supported through pathways for student activity. These pathways are articulated with professional support and career development for allied health practitioners, supervisors and educators, and are supported and recognised at all levels of organisational leadership as underpinning workforce development and retention. These findings elaborated the need to refine the initial theory to reflect the systemic and dynamic nature of learning culture.

Evidence-informed revisions to program theory three: INVEST

Initial program theory development identified a gap in detail about how placement capacity initiatives are funded, and this was further elucidated through the policy review which identified the distributed positioning of allied health across ministries, sectors and jurisdictions. Survey respondents emphasised the importance of sustained funding to develop placement capacity within their organisation – which might include defined remuneration of supervision time, tangible assets like equipment or computers, or recognition and support of the investment providers made in workforce development activities. Multifaceted investment was identified as valuable when:

“provided in unison and not in isolation as it's holistic support and investment that results in greater capacity. Fighting for each individual aspect is time consuming and costly.”

This view problematises short-term, ad-hoc and opportunistic funding of isolatable placement activities; rather than a more formalised investment structure that enables organisations to plan and strategically position placement education, while also retaining flexibility so investments can be shaped to local/contextual needs. Formalised, strategic investment guidelines may assist to identify and make visible mutual benefits, which may be different for different partners:

“Investment also needs to come from the accrediting bodies. Right now for example, our accrediting body mandates placements but gives very little recognition or incentive for supervisors to take them on. There is also a significant amount of 'mis-trust', whereby placement requirements are over-prescriptive and don't recognise a rapidly changing industry + 'future opportunities'. Also, universities have a long way to go in recognising the actual workload to run placements well, particularly in relation to building and maintaining relationships + adequate student support. It isn't something that can easily be calculated, but too often that is what most attempt to do.”

The contextual influence of communities on ways of working for allied health professionals was identified as a challenge, particularly by sole providers:

“Health organisations are large enough to create learnings cultures of their own, with limited influence of communities. However, for smaller allied health providers/organisations, community culture and investment may be a facilitator.”

A return on the investment must be visible for all parties who partner in placements and interact with the activities of placement, including less visible recipients - communities, government and accrediting bodies. In line with the multiple capitals which are invested (i.e. social, relational, time, interest/energy), investments must be returned beyond only a financial investment. This must be clearly foregrounded and understood, and further identified within relevant policy documents and collaborative frameworks for placement capacity:

“I wouldn't say that student placements are a priority to me in my work. I do not receive additional pay to take on students. My main priority in my work are the children and families we are servicing. I am happy to take on students if it is supportive of meeting the goal of providing a quality service to students and families.”

A tension exists in understandings of student placements, which must retain its imperative to facilitate student learning and competency development, in spite of conflated interpretations of students as workforce and resource:

“Well educated students can be a useful resource in healthcare where budgets are tight and staffing is often limited - students could be of assistance to aid the workforce challenges and in turn be seen as a priority.”

Whilst placement capacity development is situated within a discourse of students 'value adding' to placement partnerships, learning, and being permitted to 'be' a learner must continue to underpin the purpose of placements. The 'Invest' program theory in particular, demonstrates intersections and links with and across each of the other program theories, that informs an adaptive, flexible approach to placement modelling and capacity development. It is critical that these tensions/different understandings are acknowledged and balanced to allow mutual benefits for students and service providers.

Evidence-informed revisions to program theory four: SUPPORT

The importance of proactive supports for students and supervisors within placement has become apparent (AHPRA, 2024). There is a growing body of evidence linking collaborative learning placement models to increased placement capacity (e.g. Rajan et al, 2024); and identifying how structures during placements need to be contextually responsive, locally tailored (Allison & Thompson, 2023), and astute to the needs of the student (Masterson et al., 2021).

Diverse supports might be required to support allied health placement capacity and will shift according to an evolving set of factors. For example, pre-placement simulation to build student confidence (Johnston & Wakely, 2020); online repositories of placement support materials to reduce workload burdens for time-poor clinicians or placement providers (Monaghan & Robertshaw, 2024). New policy iterations that cause tension in the industry landscape, for example, the transition to the National Disability Insurance Scheme, pose opportunities for strategic resource development (Foley et al., 2021).

Some studies indicated that peer learning/student led services increased development of workforce-desired capabilities (such as leadership). Technology could be in some cases leveraged to enhance support for students. However, the fragmented environment of allied health workforces was identified as a support barrier to providing student placements:

“This assumes workforce stability, career development, and capacity for a provider to build the scaffolding around supervision training, PD, and capability development.”

Service providers also identified the need for supported supervision capacity development to enable effective student learning in placement settings, but noted the challenge and lack of consistency in accessing development opportunities that reflected the range of allied health practice contexts:

“It's important that we remember that clinicians are experts in their field of practice, but not always inherently good educators. It is the responsibility of the University to assist in this training.”

“Supervision/teaching is a skillset independent of clinical expertise. Clinicians benefit from "education" P.D. and this flows through to students.”

These survey excerpts convey that providers and supervisors of placement education experiences may feel they are working beyond their capacity as a provider; with the role of clinician not including the role of future and current workforce development. Overlaying this perception, is that the support provided to students comes at a real material cost to providers – cast here in financial terms:

“Yes this (support) is something our service has been dedicated to developing. But is difficult in the private sector and comes at a significant cost. Our last round of placements occurred at a cost of \$1500 per student (decreasing KPIS to allow Supervisor the time to adequately support the student).”

The capacity of providers to engage in placements was further complicated by reported challenges in accessing real-time supports during placements, that needed to be timely and responsive, but had at times been patchy and absent:

“This is not currently being provided by universities. When assistance is needed or requested universities are not responsive.”

Given that it is the placement provider who is directly adjacent to the student – if the university is non-responsive – the responsibility for the student is placed with the supervisor, without dedicated supports for this. This disjuncture was identified within the policy review; where the expectations of placement providers – both individual clinicians and collective organisations – were critical to allied health education, embedded within authorising frameworks (i.e. accreditation); but support mechanisms were not stated.

“Quality support alone does not make up for the time, space and productivity pressures supervisors feel.”

Some feedback provided within the survey identified that the ‘Support’ program theory as-stated did not go ‘far enough’ to support placement providers in cultivating a learning environment for students:

“Still does not address staff burnout/fatigue - how can clinicians who feel crushed by their workload and working conditions foster a positive learning experience for students?”

Dedicated support positions which link universities and placement providers around placement education could offer inroads here. However, there are challenges in sustaining these positions, and providers identify the need for financial investment *in addition to* supports:

“This statement is true and more educator support will translate to higher quality - however if the 'quality support' doesn't include some form of funding then it will have no impact on capacity..”

This last excerpt points to the need for program theories to be applied holistically, rather than in isolation.

Evidence-informed revisions to program theory five: MUTUAL UNDERSTANDING

Our early development of program theories highlighted trust as core to placement capacity. Trust as a mechanism for placement capacity could be located within strong partnerships, allowing honest and authentic conversations between involved partners in student placement education.

We hypothesised that trust from accrediting bodies towards universities would enable responsive placement development through reduced prescribing of inputs. However, this is counterposed with the quality assurance mechanism that accreditation plays: serving as an external regulatory environment that can only adjust so much to local context:

“It's good to have flexibility, but I do feel there should be an agreed upon standard that all courses must agree to for graduating students.”

“Students do need to demonstrate a baseline level of competencies across the entire spectrum of physiotherapy before we can safely "let them loose" on the general public”

The refined theory replaces trust with mutual understanding to better capture how placement capacity can be enhanced when professions, accrediting bodies and universities develop mutual understanding(s) about what constitutes appropriate placement design for developing robust professional competency, supporting student learning and authentically preparing the future workforce. This understanding must be evidence-informed, as shown by the emergence of capability-focused accreditation frameworks that emphasise preparation and competency over strict credentialing or input focused requirements (e.g. time). While the 'Trust' program theory initially privileged the position of the university and accreditation providers, survey data has suggested that trust is mutually shared through the education network, including also service providers, students and communities. The recursive relationship between student capability and future workforce adds further context to the need for mutual understanding, as outlined by a survey respondent:

“I generally agree with this statement but I also feel that there needs to be trust between the universities and the future employers as the future employers need to be confident with the standard of graduate that they will be employing.”

Any innovation must occur within structured frameworks; and accreditation frameworks can both enable and constrain innovation in placement capacity (Haralambous et al., 2024) and limit adaptability of systems. Changes in accreditation requirements can catalyse new models (Monaghan & Robertshaw, 2024); but also provide important safeguards. This was seen as important by survey respondents considering the adjusting landscape of higher education in Australia:

“Given the significant reduction in placement hours across the last decade, and the significant decrement in quality of graduating physios, along with the number of new courses providing physio in Victoria that are not delivering quality graduating physios I can't agree with this statement and think that more oversight is required.”

Some survey respondents reflected on the difficulty of trust to coexist with the profit or throughput incentives for universities:

“Some hesitancy must be exhibited given the embedded incentive for universities to pass regardless of the community impact”

“I do not feel that most Universities are focusing on developing workforce ready students.”

Mutual Understanding remains one of the program theories due to its fundamental importance. However, the survey data clearly show that this is inconsistent across contexts which shape placement capacity. This is a critical finding from our project, and identifies the need for urgent action that brings people involved in practice-placement education together within a partnership approach sensitive to power dynamics, and an openness to invest symbolically and pragmatically to matters of placement capacity – which involve communities and students in addition to universities and placement providers:

“The unis are in a better position to know and understand their students, but both unis and accrediting bodies need to work with the workplaces to better understand community needs.”

“Consideration in how much tolerance there is for the gap between students meeting readiness and competency vs being work ready... in my experience many new graduates are not work ready. How can community and industry be involved in this co-design?”

Mutual understanding strongly influences placement capacity. However, the capacity for involved people to understand each other, and the processes by which allied health placements are developed and enacted, suggests the importance of mutual understanding as being jointly conceptualised and held across education, practice and community landscapes.

Partnership and learning with Aboriginal and Torres Strait Islander Communities: Gaps and Silences

Evidence from the focused literature review and accreditation analysis was implicative of cultural responsiveness in relation to placement capacity. Within the focused literature review there was some evidence of initiatives being tailored to places and spaces and in consideration of “local problems”; for resources to be culturally informed; for community members to be involved in placement delivery; and the importance of “community literacy” (although this was usually in reference to rural and remote communities, and not specifically Aboriginal and Torres Strait Islander communities)(Lyle and Greenhill, 2018; Johnston and Wakely, 2020; Walsh et al., 2023). Across the accreditation documents we found evidence within the standards and/or in the supplementary information for universities to ensure culturally responsive practice and cultural support services. Amongst the documents, these terms were used in reference to placement experiences specifically, as well as broader requirements for the curriculum as a whole. What was not identified in the review was evidence of partnerships with Aboriginal communities and exemplary placement/ learning experiences that support culturally responsive practice, student learning and development.

One of the key limiters for most professions in creating placements with organisations who serve Aboriginal and Torres Strait Island communities (e.g. the Aboriginal Medical (Health) services) is the accreditation requirements that students need to be supervised and assessed by someone from the same profession. For organisations who are either government funded or NGOs, resources to employ allied health professionals as supervisors and assessors of student learning are sparse. In turn, universities, whilst acknowledging the importance of these potential placements, lack the resources to employ or contract allied health professions to provide the supervision/assessment. Even where resources may exist (e.g. university employed supervisors), the sheer lack of Aboriginal and Torres Strait Island allied health professionals to ensure culturally safe and competent practice is a key limiter on developing placement capacity.

There are significant gaps in current evidence related to partnering with Aboriginal and Torres Strait Islander communities designing allied health placements and learning that supports allied health students to develop and demonstrate skills for culturally responsive practice. The actions proposed throughout this project have not been with codesigned Indigenous peoples and should be interpreted with caution in light of the lack of evidence produced from the review. Evidence generation is urgently needed, as these opportunities also need to be considered with identified risks, such as the perpetuation of power and ownership over placement design, intentions and outcomes.

**Mapping interrelations between program theories:
The need for an adaptive system for placement capacity**

The survey findings have demonstrated the interconnections and inter-dependencies of and between the refined theories. Respondents identified that focussing on a single program theory was unlikely to result in a meaningful or sustained improvement in placement capacity. The interconnectedness of the program theories is illustrated in the below service provider quote, that identifies learning culture as intersecting with investment and placement support.

“The process of supervising, educating, and supporting students, along with managing the associated administrative workload, often becomes untenable. This challenge is unrelated to our learning culture—it’s about the practical constraints of balancing these responsibilities with the demands of running a busy practice. Recognising and addressing this burden through meaningful support or incentives for practices could make placements more sustainable without compromising the quality of the learning experience.”

Further, the survey data provided examples of how partnered approaches to allied health placements, which are informed by and responsive to the needs and perspectives of all partners could be adaptively designed for the purpose and value of the placement, fulfilling the intents of each of the program theories, and particularly culture, support and investment.

“Could provide more guidance to us on expectations of the university for placements as well as helping universities understand the pressures that placements can put on the operations of hospital pharmacy departments. Would allow maybe some pre-placement work to occur where students could contribute to pharmacy operations as part of the placement”.

“A large part of whether student placements are accepted/rejected by health providers are the allocated dates. At times this can clash with significant key dates within the public health system (e.g. last week of January is always JMO (Junior Medical Officer) orientation across NSW Health and this makes it difficult for clinicians to accommodate for student placements)”

Adopting an adaptive system would involve reorienting away from individual, site-based perspectives on placement, to a systems approach, which is contingency focused, and involves working responsively, across sector/across agency/across university. When considered at the individual level, there are fundamental tensions within the placement system. For example, between systemic workforce needs and student needs. The “system” could consider students’ education needs as part of the broader allied health workforce, and in particular, conceptualised as future workforce, whilst the students understand themselves as autonomous learners. Survey respondents frequently identified this relationship between allied health placement activity and workforce as

facilitating (their) engagement in placement education. This conceptualisation of a ‘pipeline’ of workforce development as inclusive of pre-qualification education and training is analogous to policy positioning for medicine and nursing workforce development, which may facilitate an equivalent positioning for allied health.

This integration between the systems of student placement and workforce development is illustrated in a recent scoping review of midwifery placement capacity, published after our focused literature review was completed. This identified the benefits of positioning placement capacity in relation to workforce and population needs (Lloyd et al., 2024). The authors identified that mapping population needs and workforce alignments across diverse settings could guide educational institutions and policymakers in designing diverse and sustainable placement structures. Importantly, they provide evidence that student exposure to a diverse range of placement environments enhances their awareness of practitioner roles; but work-life balance and role delineation issues could have negative impacts on student practice experiences so need careful and collaborative navigation (Lloyd et al., 2024).

Mapping how an adaptive system of placement capacity could be situated within an integrated workforce pipeline

Positioning the responsibility for placement education more clearly as an allied health workforce mechanism may enable new opportunities for sharing resources, knowledge and expertise to develop sustainable and innovative placement models. This might include something as shown within the Sydney Local Health District Allied Health Clinical Stream Position Paper (2020-2025, p. 26):

“The provision of clinical education, including student placements in Allied Health professions is considered a priority within the District and serves as both an educational opportunity and a workforce strategy. There are specific student led clinics designed to optimise student’s exposure to evidence based practice and clinical practice (e.g. Podiatry student clinics, Speech Pathology student led outpatient clinics)”

Scope of practice documents identified the need for investment in the allied health workforce, particularly in areas of primary health and preventive care. These are emerging practice areas for several allied health professions, with future workforce developmental needs intersecting with the need for minimum data required to design allied health services that address population inequities and resource constraints. Allied health placement capacity, developed as a mechanism to facilitate workforce and service provision in these emerging areas, may be deployed to support resource development. Examples exist of placement models that inform workforce development (e.g. project-based placements; service-learning placements). Embedding placement innovations within workforce and discipline-based frameworks could increase their utility as a pipeline mechanism, potentially leading to more systematic and sustainable

implementation. These innovations may concurrently develop placement capacity in areas and settings in which placements are historically under-represented, and in which student learning experiences and preparedness are less prominent. This adaptive system supports both placement capacity and workforce development as an outcome, with prospective placement modelling that draws on the inter-relationships between the five program theories (e.g. development of such innovations must be in partnership with accrediting bodies).

An example of the benefits of bringing placement concerns together with broader workforce and population-demand concerns, is the recent policy changes to increase the number of psychologists available to Australians:

To address bottlenecks in the psychology training pipeline, the Albanese Government will also provide Supporting Provisional Psychologists to Practice grants to increase the availability of psychology internships and supervisor training. This initiative will support provisional psychologists by funding 681 one-year internships over a four-year period and up to 2860 Psychology Board of Australia endorsed supervisor training places. To prioritise areas of greatest need, half the internships and supervisor training will be offered to people in First Nations communities, culturally and linguistically diverse communities and people living in regional, rural and remote areas of Australia (Joint Media Release from Ministers Butler, Clare and McBride, 2024).

A related and concurrent tension is between university business models and workforce development. Universities market diverse and ample placement opportunities to attract students yet must ensure the input costs of administering placements are viable to attract and retain students. Competing motivations of the different partners in the allied health placement system are constantly being balanced; supporting student learning versus building workforce capacity. Likely these tensions cannot be resolved within current project, but they warrant acknowledgement in reporting. Our survey data showcase that these tensions are directly interrelated with concerns around, and motivations towards, placement capacity:

“I think Universities will err on providing less and less placements and require less and less of students because they are essentially a business. They cut back on staffing wherever they can and it is my opinion that student skill levels are going down as well. Unis want to attract students to do that they want students to tell others that it is easy to pass. Our University also has a very low ATAR level to enter and this is reflected in the capabilities of the students we get and the level of issues that arise during placement.”

Figure 2 conveys the interactive positioning of placement capacity with regards to workforce capacity. This positioning could serve as a foundational context in which any mechanisms that seek to optimise placement capacity are embedded (i.e. the program theories).

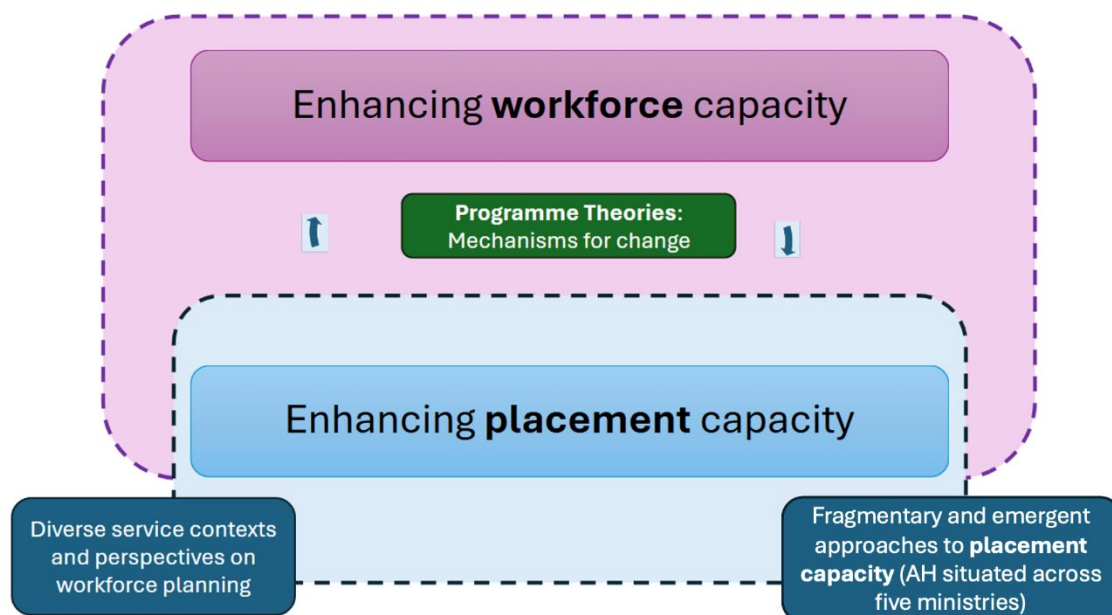


Figure 2 Concept map showing placement capacity nested within workforce capacity

The peripheral concepts in the diagram serve as indicators of contextual factors arising from the data collection and synthesis across the project (PAG expertise, policy, evidence, and accreditation review). Interpreting the data at a systems level allows workforce development to be situated in relation to placement capacity (and vice versa). For example, consideration of structural vulnerabilities such as reduced supervisor capacity and provider expertise in the domain of placement education; considered in relation to workforce issues, like attrition and burnout. In this frame, workforce capacity is positioned as part of the solution to placement capacity, and vice versa.

Positioning program theories within ‘real world’ case studies

The exemplar case studies below were derived from de-identified survey responses and are intended as illustrations of placement capacity interventions situated through the lens of the interacting program theories.

Allied health case study one

Context/setting: At a regional hospital, student placements were not occurring because of issues with placement duration and staffing and supervisory availability (i.e. part-time clinicians).

Intervention: The service provider worked with universities to adapt placement design, including a shift from full time to part time and shared placements with other local providers (e.g. community health and private practice).

Factors contributing to increased placement capacity: Respondent reported that the university’s flexibility, change being driven by the allied health professionals within the service,

and partnering with university and community services resulted in increased placement capacity.

Evidence of adaptability to other contexts: a shift in supervision culture (especially for part time staff); greater leadership in placement organisation; prioritisation of student placements within the service and university; flexibility in relation to placement scheduling/design.

Positioning program theories: Case study one exemplifies how solutions towards increasing placement capacity integrated SUPPORT (supervisor training and capability), LEARNING CULTURE (prioritising of student placement and placement leadership), PARTNER (with multiple partners to enable placement design that is flexible and colocated) program theories and MUTUAL UNDERSTANDING (to support alternate modes of supervision and placement experience across multiple settings).

Allied health case study two

Context/setting: In a regional hospital Allied health management aimed to increase numbers of student placements over a three-year period.

Intervention: Supervisor ratios were increased from 1:1 to 1:2; partnerships with universities were increased; culture change was fostered within the department (including providing education on the benefits of students for supervisors and “the pipeline”).

Factors contributing to increased placement capacity: A positive cultural shift towards supervision as business as usual.

Evidence of adaptability to other contexts: “Workplace education on benefits of students and focussed planning with workplaces around ways they can increase their student numbers including training and support, clinical supervision tool kits, student-led and emerging service model planning and university partnerships”

Positioning program theories: Solutions are evident across SUPPORT, LEARNING CULTURE AND PARTNER program theories.

Allied health case study three

Context/setting: “Statewide centralisation of placement allocation to University partners and development of a collaborative Student Placement Reference Group with membership from University and Health sector.”

Intervention: Statewide partnership/ collaboration.

Outcome: “Equitable access to state health department placement capacity; ability to report and share placement data; development of a collaborative supervision training series (reduce duplication, improve supervisor access); shared understanding of drivers and priorities.”

Factors contributing to increased placement capacity: “Regular meetings as a collaborative to negotiate and allocate placement capacity; problem solving governance and statewide placement issues together; planning ahead for innovation in placement models to create a shared vision and priorities.”

Evidence of adaptability to other contexts: Within state Health, each Allied Health discipline has a similar, statewide approach to placement allocation and capacity building. Adaption is required for profession-specific nuances.

Positioning program theories: Example of collaboration and PARTNERING within an organised structure (Consortium formed); INVEST in structures to support collaboration

Allied health case study four

Context/setting: Discipline specific student coordinators

Intervention: Coordinators support supervisors, facilitate coordination of placements, deal with student placement issues, support clinical teams and students on placement

Factors contributing to increased placement capacity: “having the dedicated EFT and the role they have, means the clinicians do not have to do these tasks and they can focus on providing student learning.”

Outcome: “Teams work with their student coordinator and have established an effective relationship”

Evidence of adaptability to other contexts: “Other organisations have implemented the same role. However, this role can be very admin heavy.”

Positioning program theories: Example of solutions across SUPPORT, CULTURE and INVEST Program theories groupings.

Non allied health case study one

A regional area was unable to support university placements due to a lack of affordable accommodation options, putting them at risk of losing funding support from universities which supported a clinical educator role. A lack of suitable, affordable accommodation, compounded with a lack of university financial support meant students were unable to travel to the placement location. The respondent highlighted financial assistance for placements as one potential strategy to increase placement capacity, along with procuring accommodation which could be provided to students at a discounted cost, potentially alleviating placement poverty/accommodation costs.

Positioning program theories: Example of solutions across SUPPORT and INVEST program theories groupings.

Non allied health case study two

An ‘opt-out’ model: Nursing staff advise when they cannot have students, rather than when they can have students, shifting to a culture of expectant consistency in relation to student capacity (unless there is exceptional circumstances). The respondent described this as an “opt-out” rather than “opt-in” approach to placement planning.

Positioning program theories: Example a CULTURE change, facilitated by leadership expectations.

Recommendations

This work culminates not in solving a specific problem, but in reframing how placement and placement capacity is understood. There is no finite target or endpoint that represents 'sufficient' placement capacity. Instead, we propose systemic solutions, recognising that meaningful change must occur at a systems level.

Based on the analysis presented in this report, we have developed a set of strategic recommendations aimed at addressing the challenges and opportunities for increasing placement capacity across allied health disciplines. We recognise the need to situate recommendations within the parameters of what is feasible in the current landscape and what is sensible for the allied health professions and beneficial for the recipients of allied health services.

In this respect, our analysis used existing evidence and concepts to interpret-in-advance how certain recommendations could be implemented within the various landscapes of allied health practice and to what effects. This positions the recommendations as evidence-based assessments of what is needed to increase placement capacity, with actions involving/across multiple sectors, jurisdictions and partners.

Recommendation one: Align placement capacity development to current and future population needs.

Align allied health placement capacity development, with multi-sectoral strategies that respond to current and future population needs. This will direct the focus and learning activities of allied health placements in areas of projected need, supporting aligned knowledge and skills development required for the future allied health workforce. Strategies across sectors and jurisdictions are relevant here.

Table 6 Suggested actions and assessment of impact (recommendation one)

Suggested actions	By/with whom
Adopt multi-structural, centralised and strategic approaches to allied health workforce planning and development, which includes consideration of pre-qualification placements.	National, State, Territory and Local government

Map current service gaps and future workforce requirements.	Collaborative network of Chief Allied Health Officers, consumer and community groups, peak body representatives, professional associations and university personnel
Evidence-informed assessment of impact	
Short-term (2-3 years)	Longer-term (6+ years)
Preliminary networks and work towards developing integrated understanding of allied health placement capacity with regard to population needs	Access to novel funding streams that cross sectors (i.e. workforce development, higher education, and service provision).
	Placement capacity is targeted to areas of population need.
Evidence-informed assessment of no action	
Continued patch approach to placement availability, and growing divergence between required and available placements.	
Placement capacity does not meet student needs; allied health workforce growth stagnates, and populations cannot access allied health services as needed.	
Continued inability to provide sufficient quality placements to enable growth of student numbers.	

Recommendation two: Ensure responsibility and resources for current and future allied health placements are visible in sectoral policies that include allied health services.

Ensure responsibilities and resources for allied health education and training are stated and visible in ministerial, departmental and funding policies and procedures across sectors in which allied health service provision is provided. Ensure specific resourcing for allied health placements in the sectors that require allied health workforce, and for population needs that require allied health services.

Table 7 Suggested actions and assessment of impact (recommendation two)

Suggested actions	By whom
Embed allied health resourcing and responsibility in policy across all relevant sectors in alignment with equivalent positions for medicine and nursing and midwifery and teaching professions.	National, State Territory and Local governments and universities
Coordinate cross-sector funding which supports broader placement capacity strategy rather than fragmented local initiatives, recognising that coordination of multiple funding sources may be necessary.	

Implement transparent reporting of resource allocation for allied health placements, with data reporting across Commonwealth, State and Territory levels and reflecting sectoral portfolios.		
Develop a national stance on payment to industry for allied health placements, agreed to by the Commonwealth, states and territories, and applied through the National Health Reform Agreement.		
Evidence-informed assessment of impact		
Short-term (2-3 years)	Longer-term (6+ years)	
Resources and responsibility for allied health placements are visible in policies that pertain to allied health (including at profession-level) and allied health workforce.	Access to novel funding streams across sectors is supported (i.e. workforce development, higher education, and service provision).	
	Equitable distribution of resources across all health professions according to trajectories of need.	
	Placements are appropriately resourced, with clear lines of responsibility for this.	
Evidence-informed assessment of no action		
Continued lack of adequate resourcing to support allied health placements		
Continued inability to provide sufficient quality placements to enable growth of student numbers		

Recommendation three: Position allied health placement education explicitly and systematically in National, State and Territory health professional education, training and workforce policy, guidelines and procedures to ensure an accountable, coordinated approach to allied health placement capacity.

Position allied health visibly and explicitly in education, training and workforce policies through coordinated cross-sectoral responsibility and accountability. This approach will address multisectoral complexity and distribution challenges inherent with allied health workforce. This aligns with the drafted recommendations within the National Allied Health Workforce Strategy to “enhance student supports, supervision incentives and clinical placement opportunities to develop capabilities and support work readiness” (recommendation 3.2, p. 21).

Table 8 Suggested actions and assessment of impact (recommendation three)

Suggested actions	By whom
Ensure data regarding and informing allied health education and training	Collaborative network of Chief Allied Health Officers, consumer and community groups,

needs are systematically collected and reported for Commonwealth, State and Territory purposes, enabling evidence-based policy development.	peak body representatives, professional associations and university personnel.
Evidence-informed assessment of impact	
Short-term (2-3 years)	Longer-term (6+ years)
Evidence informed workforce planning and the development of education and training programs to meet demand.	Shared understanding of and communication about the needs for allied health education, training needs, and population demands.
	There is a coordinated approach to allied health placement capacity, and placement capacity can flexibly respond to evidence-based development, evaluation and accountability.
Evidence-informed assessment of no action	
Inconsistent and inequitable approaches to resourcing of allied health education and training across sectors	

Recommendation four: Ensure data regarding and informing allied health placement-based education are systematically collected and reported for Commonwealth, State and Territory purposes, enabling evidence-based placement capacity development, evaluation and accountability.

Without accurate, up to date, specific data outlining allied health education and training needs, issues and challenges are not visible to government departments. This recommendation is consistent with the National Allied Health Workforce Strategy which underscores the need for robust data to inform workforce planning, to identify gaps and to ensure a more responsive and well-informed system.

Table 9 Suggested actions and assessment of impact (recommendation four)

Suggested actions	By whom
Develop national placement registers (i.e. cross-university and cross-sector) to provide data on current placement activity and distribution and enable identification of gaps as well as barriers to participation and opportunities for flexible innovation.	Universities, working in collaboration with each other and placement providers
Develop dataset which connects population needs with current and future allied health service data to identify strategic areas for allied health placement	Service providers (experts on service demands and

development, with strategic resourcing funnelled to support capacity development and sustained placement activity over time.	practitioner/skills recruitment) Universities (birds-eye view of multiple sectors and workforce demands)
Evidence-informed assessment of impact	
Short-term (2-3 years)	Longer-term (6+ years)
Systematic data collection of allied health education and training needs.	
Placement capacity will be improved through the opportunity to develop placement models that meet community needs and fill gaps in service provision	Evidence informed workforce planning and the development of education and training programs to meet demand
Evidence-informed assessment of no action	
Inefficient resource allocation and limited accountability without systematic reporting	

Recommendation five: Prioritise a collaborative multi-partnership approach to the development, responsibility and accountability for allied health placements, that aligns with population and allied health workforce priorities, including Aboriginal and Torres Strait Islander peoples.

Reorientate the responsibility of allied health student placements to a multi-partnership approach in alignment with workforce planning priorities and community need. This will facilitate a shared understanding of all party's priorities and drivers and the development of reciprocal relationships.

Table 10 Suggested actions and assessment of impact (recommendation five)

Suggested actions	By whom
Collaborative approaches to placement planning which extend beyond university-service provider partnerships	Universities, service providers and communities
Active involvement of key participant groups in the design, delivery, review and evaluation of placements to ensure distributed responsibility, benefit, resources, and decision making	
Models of placement informed by workforce needs	
Evidence-informed assessment of impact	
Short-term (2-3 years)	Longer-term (6+ years)
Strengthened relationships between allied health educators, universities, service providers and population groups	Formalised, strategic investment guidelines to assist to identify and make visible mutual benefits, which may be different for different partners.

Enhanced resource utilisation through the pooling of expertise, infrastructure and funding	Greater transparency and accountability of the development of placement models
Evidence-informed assessment of no action	
Fragmented efforts to develop placements models leading to inefficiencies and duplication of effort	
Misalignment of placements with workforce and community needs leading to potential gaps in service provision and unsustainable placement models	

Recommendation six: Develop and evaluate quality placement models that prioritise student learning outcomes and deliver benefits for placement partners and the community.

Develop and evaluate quality placement models that enable and support students' learning and competency development, deliver mutual benefits for placement partners and the broader community, and are aligned with allied health workforce needs. These models should recognise resource investment as relational, temporal and/or financial, with placements design to foster collaboration and sustainability and in accordance with professional accreditation requirements.

Table 11 Suggested actions and assessment of impact (recommendation six)

Suggested actions		By whom
Accreditation standards are flexible to enable interprofessional supervision and assessment of competence	Accreditation standards focus on demonstration of achievement of competencies	Regulatory authorities and the professions
Testing of innovative placement systems itself to provide mutual benefits across sectors and contexts.		
Evidence-informed assessment of impact		
Short-term (2-3 years)	Longer-term (6+ years)	
Enhanced student learning	Value of placement models extend beyond organisations to community outcomes	
Sustainable placement models are implemented, evaluated and built upon	Placements become integrated into core service delivery rather than an additional responsibility	
Community benefits through improved health care and outcomes	The development of a more competent, responsive and prepared workforce	
Evidence-informed assessment of no action		
Unsustainable, outdated, inefficient models failing to meet community, workforce and education needs		

Recommendation seven: Ensure professional accreditation placement requirements enable growth in allied health student numbers required to meet future allied health workforce capacity.

Professional and regulatory authorities must consider how accreditation standards operate as an enabler and/or limiter of placement capacity when developing/reviewing placement-related accreditation. Creating standards that strive for evidence-informed and a considered balance of input/output focused placements requirements is vital to developing placement capacity. This will enable future-facing practice while ensuring educational quality, public safety and accountability.

Table 12 Suggested actions and assessment of impact (recommendation seven)

Suggested actions	By whom
Revise and regularly review accreditation standards to ensure balance is maintained between input-focused and output-based placement requirements, allowing the flexibility to support innovation, creativity and workforce growth	Regulatory authorities, members of the profession, service users, university leadership/academics
Adopt an evidence-informed approach by the professions and regulatory authorities to the ongoing development and refinement of accreditation standards	Researchers, the profession and regulatory authorities
Implement Woods (2017) report Recommendation 12 that <i>Accreditation authorities should, within an outcome-based approach to accreditation standards and assessment processes, encourage:</i> <i>a. clinically-relevant placements to occur in a variety of settings, geographical locations and communities, with a focus on emerging workforce priorities and service reform</i> <i>b. evidence-based technological advances in the curricula and pedagogical innovations in the delivery of programs of study.</i>	
Ensure accurate interpretation of the accreditation standards by all involved, thus removing the need for supplementary documentation.	Training/education of the profession, university academics, placement supervisors, accreditors
Create an evidence-informed definition of what is a 'placement' for each allied health discipline.	Researchers, the profession and regulatory authorities
Evidence-informed assessment of impact	
Short-term (2-3 years)	Longer-term (6+ years)

All parties are cognisant of the need to use evidence to inform design and development of accreditation standards	The practices of accreditation developments and implementers is informed by evidence.
All parties consistently and accurately apply accreditation standards to placement design and implementation.	
Evidence-informed assessment of no action	
Primarily input-focused standards will continue to hamper development of innovations that support workforce growth.	
Community needs will not be met due to limited workforce growth	

Recommendation eight: Embed flexible curriculum delivery in allied health programs to enable placement growth and innovations in practice education.

Embed principles for curriculum, placement and timetabling design that prioritise flexible, year-round, and interprofessional placement models to open capacity for industry engagement and enable flexible placement options for students.

Table 13 Suggested actions and assessment of impact (recommendation eight)

Suggested actions		By whom
Integrate placement education through-out program and curriculum design processes		Universities and service providers
Consider the use of blended learning approaches with targeted use of technology to provide flexibility of placement scheduling and programming		
Collaborate between service providers and universities in the development and operationalisation of innovative, responsive placement programs		
Evidence-informed assessment of impact		
Short-term (2-3 years)	Longer-term (6+ years)	
Enhanced student preparedness for practice and learning outcomes	Flexible curriculums that adapt to changes in practice and community need	
Responsive models that meet community need consistently across the calendar year	Improved sustainability of placement models	
Evidence-informed assessment of no action		
Inflexible, outdated placement models will not keep up with allied health practice approaches		
Partnerships between universities and service providers will weaken with service needs being inconsistently met across the calendar year and universities being unresponsive to consumer needs		
Program structures that do not integrate placement activities, resulting in continued inflexible, university-led placement design.		

Conclusions

This project, **Building sustainable solutions to placement capacity in allied health education** was commissioned by **Australian Council of Deans of Health Sciences** in 2024 to address the “availability of practical placements in allied health education”, because this problem is “one of the most critical educational issues facing the development of the allied health workforce in Australia”.

The project methods and recommendations address our original research questions:

- What facilitators or enablers of placement capacity are effective, for whom, and under what circumstances to increase the availability of allied health placements in the Australian system?
- How does increasing placement capacity relate to increasing the number of allied health graduates available to support current and projected workforce growth in Australia?

Realist methods were used to guide analysis of existing evidence and develop the evidence base necessary to address this critical issue. The report brings together findings from four analyses to propose some key solutions to immediate, medium and long-term challenges around “the supply of allied health placements”: Our findings highlight the complexity and interactivity of each program theory with others. Moreover, our synthesis identified the need for program theories to be conceptualised as interactive components of an adaptive system. Our comprehensive analysis and interpretations contribute to deepening our understandings of placement capacity.

As such we have provided recommendations that will support placement capacity building as demand for allied health services continues to expand. Embracing complexity and addressing these recommendations across policy, accreditation and practice will provide our best step forward for increasing placement capacity in allied health.

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Appendices

Appendix 1. Project Advisory Group Terms of Reference

Project Advisory Group Terms of Reference

Background

The availability of allied health student placements is one of the most critical educational issues facing the preparation of the allied health workforce in Australia. In an environment where allied health workforce shortages are being experienced across multiple sectors, including disability services, aged care, health and community services, developing cross sector and systems focussed solutions to placement capacity is a priority.

The Australian Council of Deans of Health Sciences (ACDHS) through a competitive process, awarded research funding to a collaborative (Adelaide University – Lead organisation, University of Sydney, Curtin University, Monash University, Flinders University) to develop evidence-informed recommendations to address this complex problem. This project will use a Realist synthesis approach to appraise evidence about placements and to synthesise this with a range of perspectives to propose solutions to the questions:

- What facilitators or enablers of placement capacity are effective, for whom, and under what circumstances to increase the availability of allied health placements in the Australian system?
- How does increasing placement capacity relate to increasing the number of allied health graduates available to support current and projected workforce growth in Australia?

Project Scope outlined by ACDHS

1. Identify, define and recommend solutions to significantly improve the availability of substantially more placements for allied health students nationally
2. Develop a clear set of universal principles defining what can and cannot be classified as meeting the requirements of an allied health placement (must consider current and future course accreditation requirements)
3. Consider a substantive sample across all allied health professional entry degree programs (undergraduate and postgraduate, including AHPRA and non-AHPRA accredited programs and programs that have competency based practical assessments and those that include time (hours) based practical placement requirements)
4. Develop high-level and more immediate recommendations that would benefit all allied health programs as a priority
5. Highlight recommendations that may be suitable for rural and remote locations but not metropolitan settings and vice versa

6. Include barriers/enablers and other factors affecting placement availability appropriate to First Nations, and vulnerable student group.

Purpose of Project Advisory Group (PAG)

1. To advise the Project Team on the initial review parameters to ensure that these are grounded in the perspectives and realities of a broad range of groups and be transferable to practice
2. To connect the Project Team with relevant people (as part of an environmental scan)
3. To assist in shaping project recommendations as they become available throughout the project
4. To review and confirm final recommendations and actions

PAG Membership

Expertise/ representation	Member
Project Team members	<p>Associate Professor Stacie Attrill, The University of Adelaide (Chief Investigator) stacie.attrill@adelaide.edu.au</p> <ul style="list-style-type: none"> • Associate Professor Gillian Nisbet, The University of Sydney (Chief Investigator) Gillian.nisbet@sydney.edu.au • Associate Professor Merrolee Penman, Curtin University (Associate Investigator) merrolee.penman@curtin.edu.au • Professor Claire Palermo, Monash University (Associate Investigator) claire.palermo@monash.edu • Dr Ali Dymmott, Flinders University (Associate Investigator) Ali.dymmott@flinders.edu.au • Ms Kristen Foley, The University of Adelaide (Associate Investigator) Kristen.Foley@adelaide.edu.au • Ms Caitlan McLean, The University of Adelaide (Project Officer) Caitlan.mclean@adelaide.edu.au
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Building Sustainable Solutions to Placement Capacity in Allied Health Education: ACDHS project report

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PAG Meetings

The PAG will meet on three occasions across the project:

1. July 2024 to scope project programme theories and Context/ Mechanism/ Outcomes (CMO) configurations as part of a Realist synthesis approach, complete environmental scans and explore other factors that influence placement capacity outcomes.
2. September 2024 timed to facilitate further environmental scan, and test and shape proposed recommendations to inform the draft project report (Deliverable - due September 30);
3. January 2025 to test and confirm final recommendations and actions resulting from ACDHS panel feedback and further iterative data analysis.

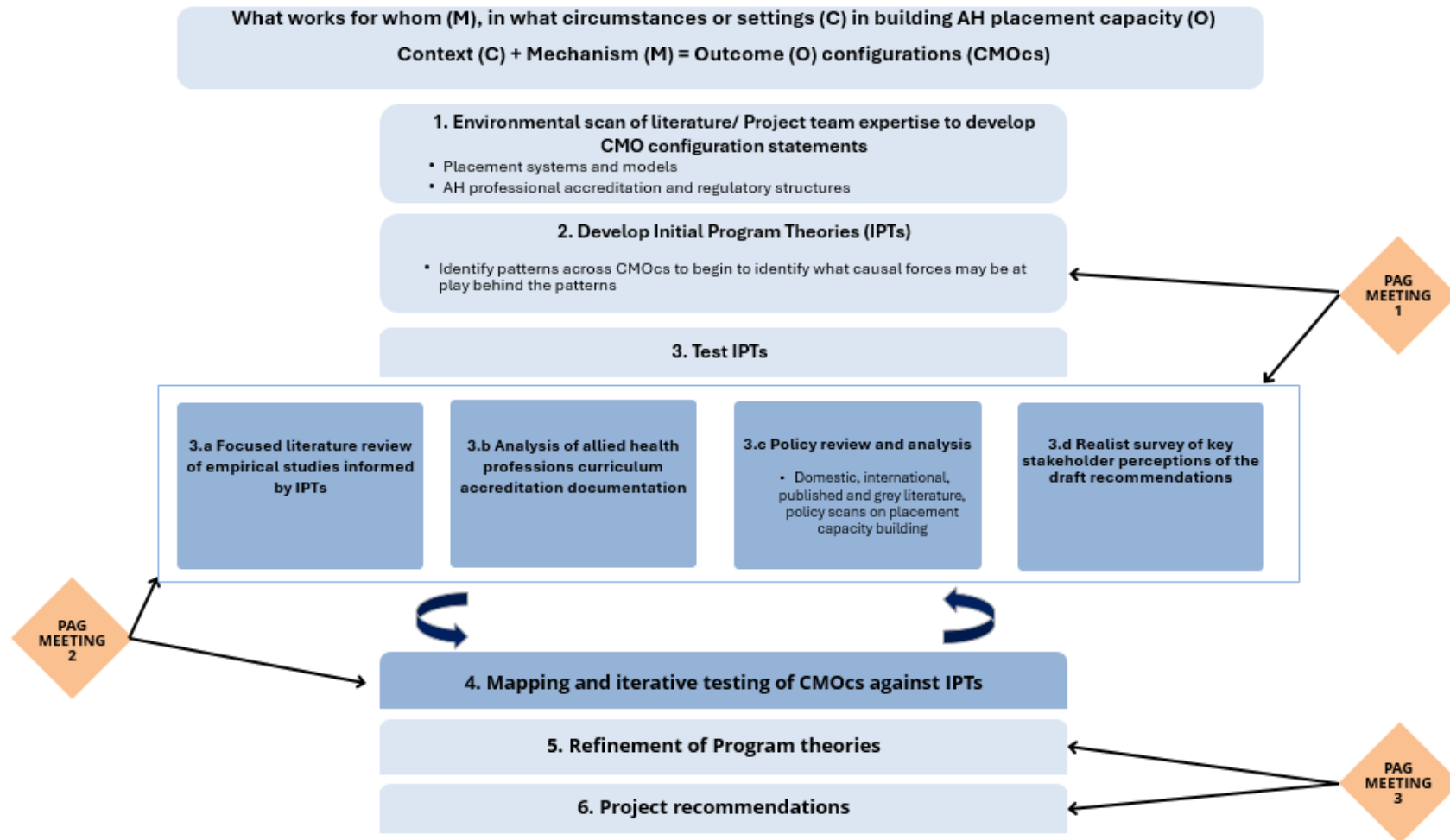
Meeting lengths:

First meeting: 1.5 hours

Second and third meeting: 1 hour

Meetings will be conducted via zoom and audio -recorded with permission from all members.
Meeting notes will be taken and distributed to PAG members

Appendix 2. Overview of project process



Appendix 3. Flow chart summarising accreditation document review



Appendix 4. Professions and associated documents retrieved for accreditation review

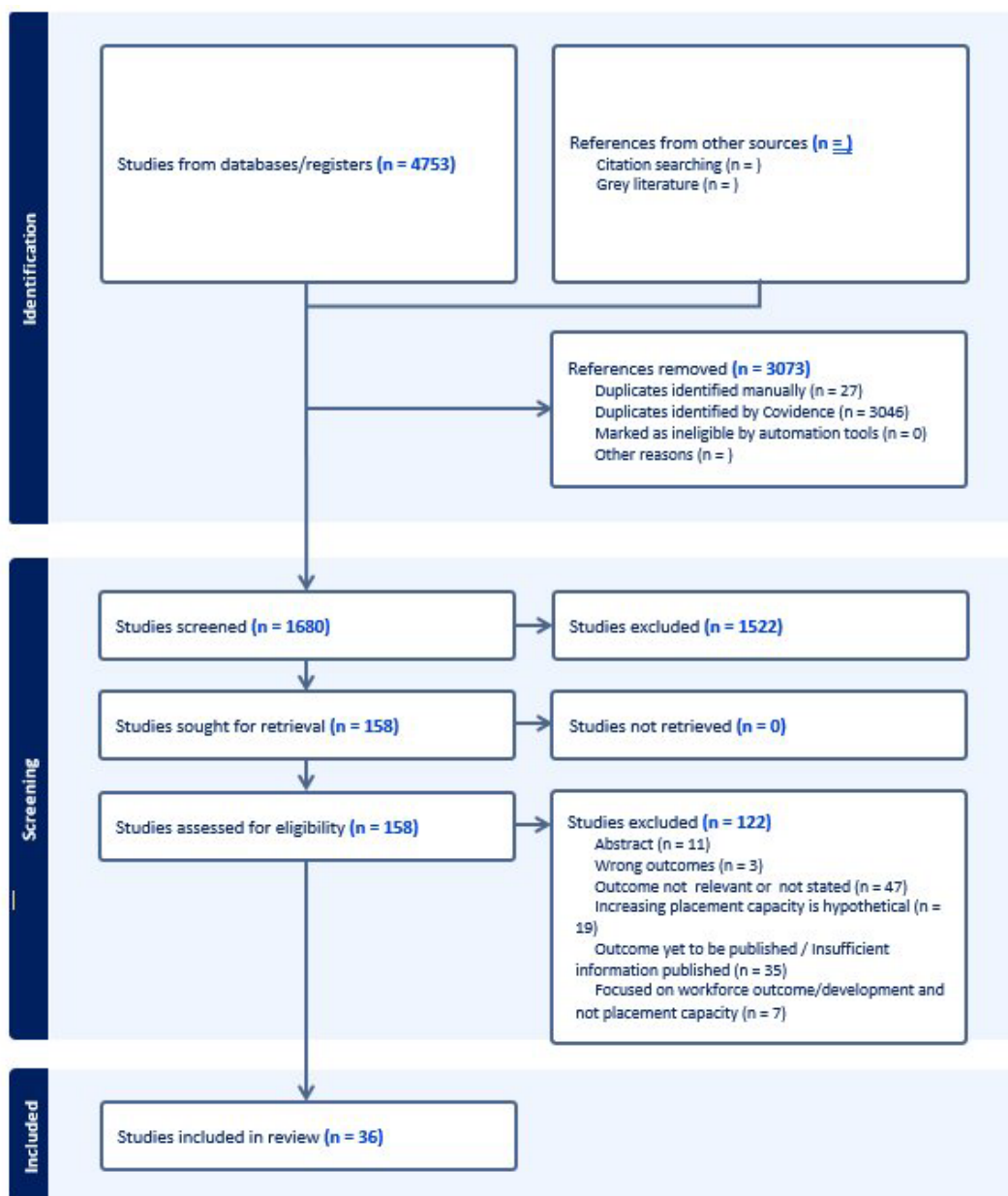
Allied health Profession*	No of docs retrieved**	Allied health Profession*	No of docs retrieved**	Allied health Profession*	No of docs retrieved**
Audiology	6	Music Therapy	2	Pharmacy	6
Chiropractic	4	Occupational Therapy	7	Physiotherapy	5
Dietetics	4	Optometry	5	Podiatry	3
Exercise Physiology	9	Orthotics /Prosthetics	3	Psychology	3
Exercise Sports Science	6				
Genetic Counselling	4	Osteopathy	4	Social Work	8
Medical Radiation	8	Paramedicine	3	Speech Pathology	6

**Documents in blue are affiliated with NASRHP.*

***Documents retrieved included those related to accreditation (inc. Evidence guides), competency standards and practice policy*

Appendix 5. PRISMA flow chart for focused literature review

Inclusion criteria



<p>Include: Allied health discipline/s, nursing, midwifery, or medicine Address placement capacity, either outcome or intervention Refer to placement capacity in Results or as an outcome Placement preparation only included IF a direct statement or link to increasing capacity existed (e.g. more willing supervisors etc) Alternate placement models or modalities (e.g. simulation, augmented by technology) included IF identify placement capacity as an outcome Published in English, after 2018</p>	<p>Exclude: Studies that focus on learning outcomes, educator experience/ student experience, or quality (general and not specific to placement capacity) Do not identify placement capacity as an outcome, result or aim Do not specifically concern placement (e.g. curriculum, course based work) No "full text" available or insufficient information (i.e. abstract not yet published)</p>
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Appendix 6. Study characteristics of included studies within focused literature review

Authors	Title	Year	Country	Discipline	Location	Setting	Study design	Intervention description
Hay et al.	Broadening placement opportunities for nursing students through an indirect supervision model	2024	UK	Nursing; Midwifery	Not specified	Private/Independent and voluntary organisations (PIVOs)	Qualitative Study	Alternate placement model (> 1:1 supervision)
Brown	A review of Operating Department Practitioner students' experiences of clinical placements as a result of changing	2019	UK	Nursing	Not specified	Education	Qualitative Study	Course/structural changes (placement auditing, managing student expectations, regular communication with mentors)
Haltom et al.	Perceived value of partnerships between schools of pharmacy and health systems	2019	United States	Pharmacy	Not specified	Varied	Not applicable - commentary, editorial, or other article that does not involve empirical	Increasing awareness of needs of preceptors/supervisors/services
Allison & Thompson	Increasing capacity by moving away from one-to-one clinical supervision: using peer-assisted learning and a group model of student placements in community paediatric speech and language therapy to enable student-led service delivery	2023	UK	Speech Pathology	Not specified	Other public health (e.g. community health) Education	Program Evaluation	Alternate placement model (Student led service provision)

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Brady, Pharris & Dunnells	Building community-engaged practicum units through anchor institutions: The case of Southside Initiative	2020	United States	Social Work	Not specified	Other	Program Evaluation	Community-Academic partnership Student innovations
Cygan, McNaughton, Reising and Reid	An academic practice partnership: Building capacity to meet sexual health education policy requirements of a public school system	2018	United States	Nursing (Masters)	Metropolitan	Education	Program Evaluation	Community-Academic partnership
Carter, Tolan and Bird	An Innovative Simulated Research Practicum for Undergraduate Nursing Students	2018	Canada	Nursing	Not specified	Research based within university, research topics not specific.	Descriptive Case Study or Educational Innovation Report	Research placements as alternative
Forbes et al.	Weighing up the benefits and challenges of hosting physiotherapy student placements in private practice; a qualitative exploration	2022	Australia	Physiotherapy	Not specified	Private organisation	Qualitative Study	No specific intervention
Haralambous et al.	An Innovative Partnership Model in Social Work Field Education	2024	Australia	Social Work	Not specified	Education	Program Evaluation	Community-Academic partnership
Johnston and Wakely	Delivering introductory physiotherapy clinical placements incorporating simulated learning experiences in rural settings	2020	Australia	Physiotherapy	Rural	Not specified	Longitudinal Design	Uptraining and promoting placements

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Lyle and Greenhill	Two decades of building capacity in rural health education, training and research in Australia: University Departments of Rural Health and Rural Clinical Schools.	2018	Australia	Medicine Nursing Allied health	Rural; Remote	Varied	Program Evaluation	Placement capacity confirmed and spoken about generally within broader scheme of UDRH initiatives
Hill et al.	Factors That Impact a Social Worker's Capacity to Supervise a Student.	2018	Australia	Social Work	Not specified	Hospital services; Other public health (e.g. community health)	Qualitative Study	Increasing awareness of needs of preceptors/employers
Leigh, Littlewood and Lyons	Reflection on creating a coaching approach to student nurse clinical leadership development.	2019	UK	Nursing	Not specified	Hospital services	Descriptive Case Study or Educational Innovation Report	Alternate placement model (Coaching synergy model)
Jirik et al.	A qualitative focus group analysis: Increasing fieldwork capacity in genetic counseling training programs.	2023	United States	Genetic Counseling	Not specified	Varied	Qualitative Study	Increasing understanding of needs of preceptors/employers
Mackay et al.	Empowering clinical supervisors to flourish through critical companionship.	2018	Australia	Nursing	Rural; Regional	Hospital services	Qualitative Study	Uprtraining of (potential) supervisors
McClure et al	Evaluation of two academic practice partnerships for chronic disease management in nursing education.	2020	United States	Nursing	Not specified	Other public health (e.g. community health)	Qualitative Study	Practice-Academic partnership

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Li et al.	Expanding Pharmacy Services With an Intern Program at an Academic Medical Center.	2022	United States	Pharmacy	Not specified	Hospital services	Longitudinal Design	Alternate placement model (Student as extender)
Masterson, Rafferty & Landrum Michalets	The Clinical Training Center: A layered-learning rotation model to meet departmental goals at a community teaching hospital	2021	United States	Pharmacy	Metropolitan	Hospital services	Program Evaluation	Alternate placement model (Clinical Training Centre: student driven care)
Monaghan and Robertshaw	Practice learning facilitators as roaming assessors	2024	UK	Nursing	Not specified	Varied	Descriptive Case Study or Educational Innovation Report	Introduction of new role (Roaming Assessor)
McBride et al.	Allied health pre-entry student clinical placement capacity: can it be sustained?	2020	Australia	Dietetics; Occupational Therapy; Physiotherapy; Speech Pathology ; Medical radiation	Not specified	Hospital services; Other public health (e.g. community health)	Qualitative Study	Program auditing
Michaels-Strasser et al.	Increasing nursing student interest in rural healthcare: lessons from a rural rotation program in Democratic Republic of the Congo	2021	Democratic Republic of the Congo (DRC)	Nursing	Rural	Other public health (e.g. community health)	Descriptive Case Study or Educational Innovation Report	Alternate placement model (Rural Rotation program)

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Walsh et al.	Supporting nursing and allied health student placements in rural and remote Australia: a narrative review of publications by university departments of rural health	2023	Australia	Nursing; Allied health (not specified)	Rural; Remote	Varied	Literature Synthesis (narrative review)	Review of existing interventions
Patel et al.	Establishing an Experiential Liaison Position to Increase IPPE and APPE Capacity and Preceptor Satisfaction in the Health System Environment.	2022	United States	Pharmacy	Not specified	Hospital services	Descriptive Case Study or Educational Innovation Report	Introduction of new role (Experiential liaison)
Twogood et al	Rapid implementation and improvement of a virtual student placement model in response to the COVID-19 pandemic	2020	UK	Physiotherapy	Not specified (virtual)	Other public health (e.g. community health)	Plan-Do-Study-Act methodology	Alternate placement model (virtual- COVID response)
Noonan et al.	The Glasgow experience: a model for GP out-of-hours teaching for year 3 medical students	2024	UK	Medicine	Not specified	Hospital services	Program Evaluation	Alternate placement model (Out Of Hours (OOH) model)
Kraakevik et al.	Managing expansions in medical students' clinical placements caused by curricular transformation: perspectives from four medical schools	2020	United States	Medicine	Not specified	University program based research	Editorial or Commentary /Evaluation	Reflection on responsive changes to program design to increase placement capacity

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Nisbet et al.	From burden to benefit: a multisite study of the impact of allied health work-based learning placements on patient care quality	2022	Australia	Occupational Therapy; Physiotherapy	Metropolitan	Hospital services	Qualitative Study	Collaborative partnership approach
Weber et al.	A dietetic clinical educator enhances the experience and assessment of clinical placement	2019	Australia	Dietetics	Not specified	Varied	Qualitative Study	Introduction of new role (Clinical Educator)
Partner et al.	First year student radiographers' perceptions of a one-week simulation-based education package designed to increase clinical placement capacity	2022	UK	Radiography	Not specified	Not specified	Qualitative Study	Simulation replacing placement/ reducing clinical time required for placement
Moran et al.	What works, why and how? A scoping review and logic model of rural clinical placements for allied health students	2020	Australia	Allied health (not specified)	Rural	Varied	Literature Synthesis (Realist review)	Review of existing, successful placement models
Wall et al.	Creating an academic-practice partnership in a primary care pediatric clinic	2022	United States	Nursing	Not specified	Hospital services	Descriptive Case Study or Educational Innovation Report	Practice-Academic partnership
Yoon et al.	Case Study: The Impact of Nursing Professional Practice during the COVID-19 Pandemic at a Large	2022	Canada	Nursing	Not specified	Hospital services	Descriptive Case Study or Educational Innovation Report	Novel workplace model to increase placement capacity

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	Community Hospital in Canada.							
Rajan and Baldwin	Student nursing placements: Collaborative Learning in Practice.	2024	UK	Nursing	Not specified	Hospital services	Editorial or Commentary	Alternate placement model (Collaborative Learning in Practice (CLiP) model)
Zuchowski et al.	A National Survey of Australian Social Work Field Education Programs: Innovation with Limited Capacity	2019	Australia	Social Work	Not specified	Education	Qualitative Study	Increasing understanding of needs of placement coordinators
Collett, Fraser and Thompson	Developing the future rural nursing workforce: report on a nursing roundtable	2019	Australia	Nursing	Not specified (but state based)	Hospital services; Other public health (e.g. community health); Aged care; Other	Descriptive Case Study or Educational Innovation Report	Round table discussions to identify issues related to placement capacity and potential interventions
Williamson et al.	Student nurses as a future general practice nursing workforce. Implementing collaborative learning in practice: implications for placement learning and patient access. A mixed methods study.	2023	UK	Nursing	Not specified	Other public health (e.g. community health)	Mixed Methods Study	Alternate placement model (Collaborative Learning in Practice (CLiP) model) evaluation

Appendix 7. Data on survey respondents

Total survey responses:		171*	
Object	No. of respondents	%	
Location			
Metropolitan	71	44%	
Regional	65	40%	
Rural	18	11%	
Remote	7	4%	
State			
New South Wales	67	41%	
Australian Capital Territory	23	14%	
Victoria	19	12%	
South Australia	5	3%	
Queensland	21	13%	
Northern Territory	16	10%	
Western Australia	4	2%	
Tasmania	7	4%	
Setting			
University	79	49%	
Government ministry (e.g. state ministry of health or Commonwealth office)	4	2%	
Hospital services	60	37%	
Other public health (e.g. community health)	22	14%	
Education (early childhood through to secondary sector)	1	1%	
Non Government Organisation or Not For Profit	3	2%	
Private organisation/private practice	23	14%	
Aged care	7	4%	
Mental health	6	4%	
Other	4	2%	

*This is the total number of respondents to the survey, inclusive of dropouts and those who did not respond to all questions.

Appendix 8: Definitions

Abductive inference*	Used to analyse data outside of an initial framework or theory; and to integrate different data and theory - including similar and contrasting cases – to better understand why something the way it is
Accreditation standard	Guidelines produced by accrediting bodies which benchmark requirements related to curriculum and competency
Adaptive system	A set of components that integrate into a system, which together <i>and in part</i> respond to their evolving environment
Allied health	Professions providing a broad range of diagnostic, technical, therapeutic and direct health services to improve the health and wellbeing of consumers they support (AHPA N.D)
Cross-sectoral	Involving and affecting multiple groups
Deductive inference*	Involves the exploration of data in relation to a pre-determined framework or theory
Input-focussed	Accreditation requirements that are quantitative and/or specific. These can be time-based (e.g. total hours) or type based (e.g. placement duration, types of clinical experiences) (Woods, 2017).
Outcome-focussed	Accreditation approaches that emphasise outcomes such as achievement of competencies
Partnership	An arrangement between two or more organisations characterised by close cooperation and shared responsibilities
Placement	Encompasses clinical placements, professional placements, practicum and work-integrated learning experiences
Placement capacity	The extent to which placements meet students' learning needs, practice competency requirements, and ensure placements are distributed in ways which meet workforce demands.
Placement education coordinator	A role internal to the university responsible for coordinating placements
Retroductive inference*	Analysis that moves beyond what might be directly observable, to explore the

Realist

context/s that give rise to and sustain certain phenomena (i.e. policy or placement capacity)

Realist studies are a particular approach within social science, which seek to develop understandings about complex interventions and how they work in practice. Realist approaches have a particular focus on context and mechanisms; and the way that these generate, influence or constrain particular outcomes

Supervisor

Encompasses people responsible for student supervision during placement, usually external to the university. We also recognise that terms are often used interchangeably, and professions have their own historical preference for specific terminology (such as placement or practice educator). Supervisor is used through the report to maintain consistency.

**for further discussion regarding these forms of inference, see Meyer and Lunnay, 2013*