

Allied health pre-entry student clinical placement capacity: can it be sustained?

Liza-Jane McBride^{1,4} BPhy, GDipOHS, GradCertHM, Director Allied Health Workforce Capacity and Capability

*Cate Fitzgerald*² BOccThy, MBA, Statewide Program Manager Clinical Education and Training Occupational Therapy

*Claire Costello*³ MSc(Nutr&Diet), BSc, Acting Workforce Development and Service Improvement Leader, Allied Health

*Kristy Perkins*¹ BPhy, GradCertHM, Senior Allied Health Workforce Officer

¹Allied Health Professions' Office of Queensland, Department of Health, 15 Butterfield Street, Herston, Qld 4006, Australia. Email: Kristy.Perkins@health.qld.gov.au

²Metro South Health, Hospital and Health Service, Princess Alexandra Hospital, 199 Ipswich Rd, Woolloongabba, Qld 4102, Australia. Email: Cate.fitzgerald@health.qld.gov.au

³Children's Health Queensland, Lady Cilento Children's Hospital, 501 Stanley Street, South Brisbane, Qld 4101, Australia. Email: Claire.Costello@health.qld.gov.au

⁴Corresponding author. Email: Liza-Jane.McBride@health.qld.gov.au

Abstract

Objective. Meeting the demand for clinical placements in an environment of increasing university cohort growth and changes in health service delivery models is challenging. This paper describes the outcomes of a quality review activity designed to gain key stakeholder perspectives on the enablers and barriers to sustaining effort to placement provision and reports on: (1) measures used to determine the effect of a jurisdiction-wide initiative in clinical education for five allied health professions; (2) outcomes of data related to key factors affecting placement supply and demand; and (3) qualitative perspectives from management, workforce and university stakeholders on placement sustainability.

Methods. This study reviewed clinical placement, staff full-time equivalent numbers, university program and student cohort data for five allied health professions from 2013 to 2016. In addition, qualitative response data from key stakeholder surveys was analysed thematically.

Results. In the study period, the rate of growth in placement offers did not match that of university program student numbers and full-time equivalent staff numbers. All stakeholders agreed that sustaining placement provision is enabled by collaboration, continuation of management support for dedicated clinical education staff, a focus on clinical education capacity building activities, outcome data reporting and statewide profession-specific governance, including leadership positions. Collaborations and networks across health and education sectors were reported to enhance efficiency, minimise duplication, streamline communication and support information and resource sharing within and across professions and stakeholders, ultimately sustaining placement provision. Identified barriers to sustainability centred on resourcing and the continued increasing demand for placements.

Conclusion. Sustaining pre-entry student placements requires stakeholder flexibility and responsiveness and is underpinned by collaboration, information and resource sharing. Dedicated clinical education positions were highly valued and seen as a key contributor to placement sustainability.

What is known about the topic? The increasing demand for student placements and strategies used to enhance placement capacity are well known. To date, there have been limited studies investigating cross-sectoral trends and health service enablers and barriers to sustaining responses to placement demand.

What does this paper add? This paper describes outcomes of a clinical placement capacity building initiative within public health services, developed from a unique opportunity to provide funding through an industrial agreement. It presents key allied health staff and university partner perspectives on enablers to sustaining placement supply in an environment of increasing placement demand.

What are the implications for practitioners? This paper demonstrates that key enablers for the sustainability of placement provision are collaboration between university and health sectors, continuation of management support

for dedicated clinical education staff, outcome data reporting and statewide profession-specific governance and leadership. It supports current practices of profession-specific and interprofessional clinical education resource and strategy development and the sharing of expertise for sustained placement provision.

Additional keywords: education and training, workforce.

Received 4 May 2018, accepted 11 September 2018, published online 22 November 2018

Introduction

Clinical placements provide students with the opportunity to develop the necessary skills and experience in the delivery of health care within a clinical setting. These placements are a core component of pre-entry allied health profession training programs and a requirement of relevant accreditation boards or councils¹ (see Table 1). Therefore, the demand for allied health clinical placements will continue to increase due to growth in university health programs and cohort numbers.^{2,3} The capacity of public health services to support placement demand has been a topic of discussion within services and across stakeholder groups responsible for the professional learning of pre-entry students.^{2,4-6} It is well recognised that commitments to clinical education at a national and state government level, innovation in clinical placement provision and support and recognition for clinical educators all contribute to the capacity of health services to meet increasing placement demand.^{2,7,8} However, attention is now being turned to the range of factors that contribute to the sustainability of clinical placement education.^{3,7,9,10}

The Clinical Education Workload Management Initiative was formed in 2009 following a Queensland Government Ministerial Taskforce on Clinical Education and Training, and was provided for within an industrial agreement (Health Practitioners (Queensland Health) Certified Agreement (No. 1), first negotiated in 2007, then renegotiated in 2011 and again in 2016 as the Health Practitioners and Dental Officers (Queensland Health) Certified Agreement (No. 2). 2016 CA/2016/15; http://www.qirc.qld.gov.au/agreement_award/certified_agreements/public_sector.htm, accessed 5 January 2018).

The Initiative was established as a collaborative, multiprofessional, jurisdiction-wide approach to build placement capacity in allied health services. A dedicated clinical education resource (i.e. allied health clinical education staff positions) with the explicit aim of building placement capacity through supporting the associated workload of students and new graduates was provided for by the Initiative. At the commencement of the Initiative professions established their specific leadership and governance structures, with the larger allied health professions opting for a dedicated statewide clinical education and training program manager (program manager) to support the professions' dedicated clinical educator positions. In the 2016 Agreement, the continued implementation of funding to clinical education management was to be monitored at a statewide level on advice from Queensland's 16 Hospital and Health Services (HHSs).

A previous study by McBride *et al.*⁶ examined the effect of the Initiative on pre-entry student clinical education for five professions (medical radiation, nutrition and dietetics, occupational therapy, physiotherapy and speech pathology). The five professions were chosen because they were allocated funding in the first stage of implementation of the Initiative. This allowed the authors' use of clinical placement activity data over the longest period of time. That study found that placement offers for these professions had plateaued in 2013, suggesting that placement capacity had been reached.⁶ Support from Initiative-

Table 1. University program information and clinical practice hours or days required for professional accreditation for the five allied health professions in this study as at 2017

Profession	No. Queensland universities offering programs	No. programs	Length of program and pathway/s	Clinical practice hours or days within program required for accreditation
Medical radiation professions including:	2	5		
Medical imaging			4-year Bachelor degree	1940 clinical practice hours
Radiation therapy			3-year Bachelor degree plus 1-year supervised practice program	2926 clinical practice hours
Medical ultrasound			3-year Bachelor degree plus 1-year graduate diploma or a 2-year graduate diploma	2200 clinical practice hours
Nutrition and dietetics	5	5	4-year Bachelor degree or 2-year graduate entry masters	Minimum of 100 equivalent working days clinical practice
Occupational therapy	8	9	4-year Bachelor degree or 2-year graduate entry masters	Minimum of 1000 clinical practice hours
Physiotherapy	6	7	4-year Bachelor degree or 2-year graduate entry masters	No minimum requirement for clinical practice days or hours
Speech pathology	6	7	4-year Bachelor degree or 2-year graduate entry masters	No minimum requirement for clinical practice days or hours

funded positions (i.e. dedicated clinical educators and program managers) had contributed to the ability of professions and health services to meet the increasing demand for placements, and staff, including managers, valued the Initiative. A jurisdiction-wide approach had also enabled greater consistency in the support provided by the Initiative positions and the central management and coordination of the Initiative by individual professions had enabled timely profession-led responses to increases in demand for placements.⁶ That previous study raised questions regarding the sustainability of outcomes, resource investment and the profession-specific governance and leadership in an environment of fiscal tightening and change.

The aims of the present study were to investigate whether clinical placement capacity had been sustained in the five professions from 2010 to 2016 and the factors affecting the sustained efforts of allied health staff to provide placement offers from the perspective of key internal allied health and external university stakeholders.

Methods

The quality review actions undertaken were: (1) appraisal of published clinical placement activity data for the five professions for the period 2010–16 (available from <https://www.health.qld.gov.au/ahwac/html/cet>, accessed 23 June 2017), including the number of placement days offered by the profession; (2) collation of statewide allied health workforce statistics sourced from the Queensland Health Decision Support System for 2010–16; (3) collation of the number of allied health programs and students within the state sourced from the University Statistics Section of the Department of Education and Training website (<https://www.education.gov.au/higher-education-statistics>, accessed 24 June 2017); and (4) review of the perspectives of respondents from the allied health workforce (including staff who supervise students and dedicated clinical educator positions), management (program managers, HHS allied health directors and statewide profession-specific network chairs) and university staff involved in clinical placements. Ethics approval was obtained from the Human Research Ethics Committee of Queensland Health.

Four customised surveys were developed and disseminated via email to Queensland Health stakeholders. University staff involved with clinical placements were contacted via the program managers and invited to complete a fifth survey. This was done to ensure that the perspectives of university staff with direct knowledge of Queensland Health clinical placement matters were captured. All surveys were designed to explore

perceived enablers and barriers to placement capacity, including any contribution of the Initiative-funded positions. There were minor differences in the questions for each survey to ensure relevance to the stakeholder group. For example, HHS allied health directors were asked about drivers for changes in staffing within their own HHS, whereas university staff were asked whether they were aware of any changes in staffing for their profession. The surveys contained a combination of forced choice, multiple choice, comment-optional and open-comment questions and took approximately 15 minutes to complete. A copy of the surveys can be obtained from the authors. In all, 327 surveys were returned by the allied health workforce (8.3% response rate) from the five profession groups subject to this review. It is acknowledged that this is a low response rate for surveys from this participant group, although survey respondents were representative of the workforce across larger and smaller professions, and across metropolitan, regional and rural and remote HHSs. In addition, 31 survey responses were received from management stakeholders (66% response rate) and 39 responses were received from university staff (53% response rate). All responses were deidentified and stored securely.

The narrative data emerging from responses to the survey questions exploring enablers or barriers to placement capacity and sustainability of placement provision were analysed thematically following a process outlined by Braun and Clarke.¹¹ After becoming familiar with the data, initial codes were generated from survey responses and themes searched for through coding, spread sheeting and discussion. Data codes were checked in relation to emerging themes with diagrammatic representation and spread sheeting used to refine and reflect on the relationship between the themes and codes for each stakeholder group and across the groups.

Findings

Trending placement, allied health staff, university program and student cohort data

In 2016, the 16 allied health professions within public health facilities in Queensland, a workforce of approximately 7294 full-time equivalent (FTE) positions, offered a total of 157 403 placement days to universities. Student placement days offered by the five professions (~3835 FTE or 52% of the workforce) represented 74% of total offers. For the five professions, placement day offers increased 39% from 83 093 days in 2010 to 115 715 days in 2016 (Table 2).

Table 2. Clinical placement days offered by the Queensland public health system to pre-entry students from Queensland and interstate universities from 2010 to 2016 for the five allied health professions

Note, one student day is equal to a minimum of 7 h

Profession	No. clinical placement days offered						
	2010	2011	2012	2013	2014	2015	2016
Medical radiation professions	17 696	17 176	17 198	18 046	18 800	22 038	23 754
Nutrition and dietetics	10 630	12 383	13 948	11 459	14 168	12 399	14 885
Occupational therapy	22 282	20 820	24 712	23 392	26 724	25 482	26 901
Physiotherapy	25 447	29 234	31 081	38 839	36 911	38 604	38 825
Speech pathology	7038	7355	9649	10 827	10 874.5	11 136	11 350
Total	83 093	86 968	96 588	102 563	107 477.5	109 659	115 715

Within these five professions, the allocation of placements is the responsibility of the university program staff. Therefore, placement offers are considered to be an important indicator of supply of placements as a result of placement capacity building actions undertaken by staff of the Initiative and allied health staff in general within health services.

Fig. 1 shows data trends for placement days offered, number of allied health programs in Queensland, commencing student numbers within these programs and Queensland Health allied health staff FTE for the five professions. The data are reported as the percentage change over time to enable the data elements to be compared. From these data trends it is evident that since 2014 allied health staff FTE numbers have been increasing gradually for the five allied health professions subject to this review. Placement days offered have continued to grow, but at a slower rate than FTE numbers. As predicted by staff participating in the previous study,⁶ placement days offered for three of the five professions plateaued from 2013 to 2016 (Table 2). This suggests that placement saturation within the public health sector has potentially been reached. There was rapid university allied health program growth from 2010 to 2013, with the number of programs plateauing thereafter. Despite nil growth in programs between 2013 and 2016, the commencing student cohort numbers have continued to grow at a proportionally higher rate than workforce growth. This increase in student numbers may be a response to address future workforce shortages. Although shortages have been predicted for medicine and nursing,¹² data and predications of future workforce requirements for allied health professions are neither reliable nor readily available.¹³ It is also possible that the growth in student numbers has been driven, in part, by the move to a demand-driven model for Commonwealth-supported students in university programs.¹⁴

Although there is an overall trend of increasing placement days offered from 2010 to 2016, the rate of increase has not kept pace with the growth in staff FTE or the potential demand for placements as evidenced by the student cohort growth. There may be several reasons for this as there are a number of factors

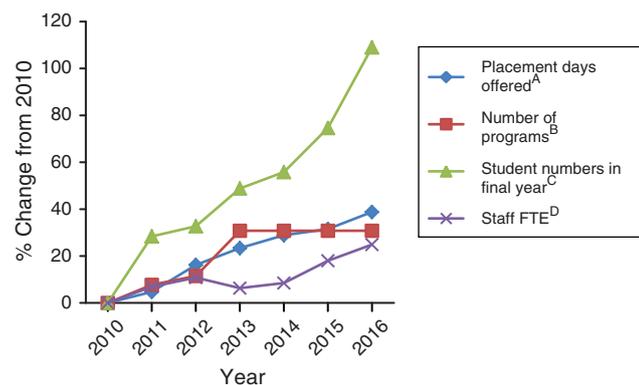


Fig. 1. Six-year trend for key factors affecting placement demand and supply, comparing data for 2011–16 with data from 2010. ^APlacement days offered by the Queensland public health system to pre-entry students from Queensland and interstate universities. ^BNumber of programs physically located in the State of Queensland ^CProjected student numbers in final year based on commencing student numbers. ^DStaff FTE, full-time equivalent, for the 16 Hospital and Health Services in Queensland.

known to affect the willingness of health practitioners to take students.^{15–17} In addition, it does not necessarily translate that increasing staff numbers leads to additional availability of quality placement opportunities. It is possible that allied health staff supervision efforts have been redirected to the education of the workforce to support safe service delivery in an increasingly complex and changing healthcare environment.^{18–20} Because there is a reported rising scarcity of clinical placements in healthcare, any growth and commitment to educating future professionals is commendable.^{2,3,10}

Customised survey response data

As shown in Fig. 2 nine overarching themes emerged from the thematic review of survey response data. In accordance with the study aim, the themes are reported below as they relate to participant group perspectives on enablers or barriers to placement sustainability.

Enablers to sustainability

All participant groups perceived that enablers for sustainability in meeting placement demand were continued collaboration between Queensland Health and universities (Theme 1), efficiency through coordination of processes (Theme 2), and the valued efforts of the Initiative-funded positions towards supporting the workload of placement provision (Theme 3). The allied health workforce and management participant groups additionally identified that management support, leadership and governance for clinical education including the Initiative-funded positions (Theme 4), demonstration of outcomes in placement offers and provision (Theme 5) and a focus on clinical education capability building of the allied health workforce (Theme 6) as key enablers. University respondents further reported that

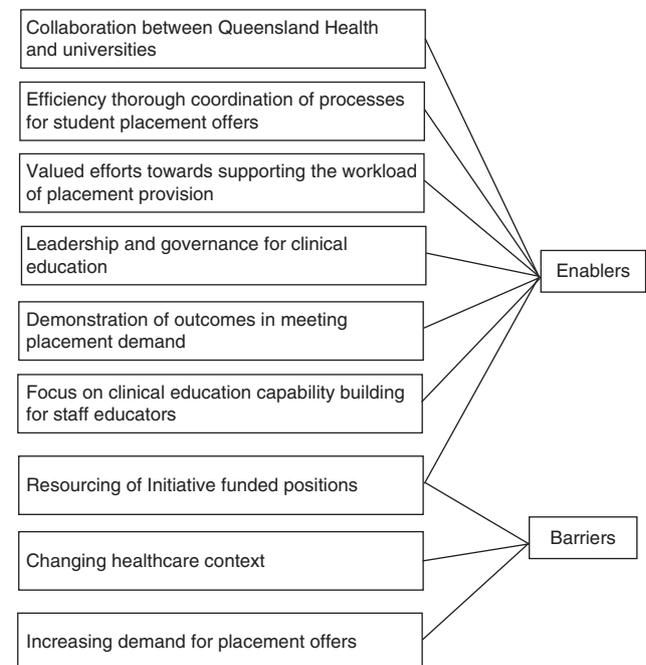


Fig. 2. Nine overarching themes from participant survey analysis.

resourcing of the Initiative-funded positions (Theme 7) would directly enable sustained placement offers.

Collaboration between Queensland Health and universities. A focus on mutual problem solving was reported to be the central factor underpinning the deliberate and responsive collaboration between internal stakeholders and external university partners. Universities reported valuing the role of the program managers as a main enabler of collaboration for placement provision across Queensland Health. The profession-specific points of contact within Queensland Health, namely the dedicated clinical educator positions within HHSs and the program manager for statewide issues, were reported to provide valued profession-specific channels for communication, collaboration and any required student placement support responses. Overall, collaboration was perceived to occur through informal and formal networks, all of which enabled the early response to placement challenges and contributed to planning for the meeting of placement demand based on projected program and cohort numbers for a profession. Professions that had arranged formal statewide networks to manage placement allocation specific to their profession's accreditation or registration requirements (e.g. The Queensland Physiotherapy Placement Collaborative²¹ and the University Occupational Therapy Practice Education Network Qld²²) reported highly valuing the profession-specific focus for clinical placement collaboration and capacity building.

Efficiency through coordination of processes for student placement offers. All participant groups valued the workload efficiencies created through the Initiative positions. They commented on the perceived direct link between the dedicated clinical educator positions within HHSs and increasing or sustaining placement offers. Given a primary aim of the Initiative communicated in the Agreement was to support the workload management of clinical placements, this outcome is encouraging. It would seem to indicate that the resource is continuing to have an effect where intended. There were also reported efficiencies from the dedicated clinical educator positions having developed clinical education expertise over time. This expertise, when shared within and between professions, was reported to contribute to placement sustainability, particularly when it focused on building the capability of all allied health professionals to host and supervise quality placements.

Valued efforts towards supporting the workload of placement provision. All participant groups indicated that the Initiative's dedicated clinical educator positions have supported, and continue to support, the workload of clinical placement provision within HHSs. Their capacity to offer localised, flexible, innovative, profession-specific and interprofessional responses to requests for placements for the growing student cohorts was highly valued. Initiative positions were identified to be integral to developing and sustaining innovative placement models or approaches, such as peer-supported learning,²³ student-led clinics,^{24,25} collaborative^{26,27} and role emerging placements.²⁸ These innovations were identified to contribute to increased placement offers, especially in the short term. It is becoming more commonplace for innovations to take into consideration the effect of clinical environments on student learning and sustained staff contributions to placements given the increasing complexity of health care.^{2,7,29} Increasingly, allied health staff are seeking placement models and supervision approaches

that enable the 'best fit' and contribution of the student placement to the work team and environment.^{29,30} This cautions managers from making a direct link between placement model innovations and increasing offers. It may be that the drive for innovation to increase placement capacity is best centred on enhancing the quality of student education and their safe contribution to health care, as well as building the supervision expertise of staff across professions, health service teams and contexts.^{2,29,31,32}

Leadership and governance for clinical education. Allied health leadership and governance support to the Initiative and clinical education in general was found to be a key enabler of sustainability. Management support to clinical placement provision was reported as building a positive and sustainable culture for student education.^{4,8} The profession-specific statewide leadership and governance of the Initiative was consistently commented upon by all participant groups as an enabler to sustainability. The statewide program managers were reported to regularly liaise with profession-specific and interprofessional Queensland Health leadership groups, engage in university, industry and health collaborations for placement allocation, and to lead the statewide network of dedicated clinical educator positions for their profession. Profession-specific responses to meeting placement demand were valued by university participants because they align with the need for the specificity of placement enquiry from the university sector for their student cohorts.³

In addition, the program managers' awareness of the often unique accreditation, placement coordination and curriculum issues across several university programs for their profession was valued by all participant groups.¹ For example, there are eight universities offering occupational therapy programs in Queensland and six for speech pathology, each with varying clinical education placement structures and requirements (see Table 1).

Demonstration of outcomes in meeting placement demand. Sustainability was also reported to be contingent upon the Initiative demonstrating to management the outcomes it set out to achieve. To aid demonstration of outcomes, a consistent and verified data collection method is used across the allied health professions and state, enabling the reporting and review of data trends (available from <https://www.health.qld.gov.au/ahwac/html/cet>, accessed 23 June 2017). Collated profession-specific clinical placement activity data are verified biannually by the professions and are reported on across professions and within HHSs. There is growing recognition of the importance of the accuracy of this data collation and verification process, with reported future plans to use student clinical placement data to calculate Commonwealth funding for Teaching, Training and Research (TTR),³³ as well as for the subsequent allocation of Clinical Education and Training (CET) funds to HHSs.³⁴ Appraisal of the above outcome data has enabled profession-specific interpretation of trends and strategic-level responses to ensure the Initiative positions, stakeholder collaborations and leadership and governance are aware and responsive. Participant groups reported that this data review and action planning was a key enabler to sustainability of placement provision.

Focus on clinical education capacity building for staff educators. Within their survey responses, university participants elaborated on the importance of maintaining the

competency of the Initiative positions to support the workload management of clinical education within Queensland Health. University partners valued the contribution the positions had made to placement strategy and resource development aiming to build the capacity of allied health staff to participate in clinical education. These outcomes have reportedly been shared by program managers and used by university partners to benefit placement providers beyond public health services. The Initiative positions have provided resources to publicly available Internet sites (such as ClinEdAus <http://www.clinedaus.org.au> accessed on 4 April 2018 and OTPEC-Q <https://otpecq.group.uq.edu.au> accessed on 4 April 2018) encouraging engagement in clinical education and have collaborated with university stakeholders for their design. This provides further evidence of the efficiencies that can be created from collaboration to support meeting placement demand.^{2,9}

Resourcing of the Initiative-funded positions. All stakeholders reported valuing the investment in dedicated clinical educator positions by Queensland Health. In 2009, funding equivalent to 87 FTE positions at the mid-level pay point within the entry level classification structure of the Health Practitioners (Queensland Health) Certified Agreement (No. 1), first negotiated in 2007, then renegotiated in 2011 and again in 2016 as the Health Practitioners and Dental Officers (Queensland Health) Certified Agreement (No. 2). 2016 (CA/2016/15; http://www.qirc.qld.gov.au/agreement_award/certified_agreements/public_sector.htm, accessed 5 January 2018) were distributed to the five allied health professions under review. It is acknowledged that the Initiative is not the only financial contribution of stakeholders to placements within Queensland Health. University stakeholders contribute by investing in staff, including placement coordinators. In addition, physiotherapy and dietetics programs make a financial contribution to Queensland Health for placements. The complexity surrounding resourcing of clinical placements by key stakeholders has been reported previously.^{35,36} Cost-benefit appraisal of the effect of financial contributions by stakeholders to meeting placement demand was beyond the qualitative nature of the present study. What is evident from this review is that dedicated clinical educator positions contribute to the sustainability of placement provision.

Barriers to sustainability

All participant groups perceived that barriers to sustainability centred on resourcing of the Initiative-funded positions (Theme 7), workforce perceptions of the changing healthcare context (Theme 8) and effect of increasing demand on the capacity for placement offers and provision (Theme 9). The allied health workforce and management participant groups additionally identified any reduction in allied health leadership and governance support for the Initiative as a key barrier.

Resourcing of Initiative positions. A reduction or reallocation of Initiative positions was identified as a barrier to sustainability given the stated perception of a direct link between the efforts of these positions and placement offers. Changes to staffing of Initiative positions had occurred as a result of ongoing restructuring. The positions had, at times, been delegated to other duties based on HHS demands or growing requirements to embed clinical education actions for new graduate staff within services.

The program managers of the five professions reported that as of June 2017, there were the equivalent of 70 FTE positions, a 19.5% decrease across the state. Despite this reduction, placement offers continued to grow. There was a reported perception that the ongoing sustainability of outcomes will be challenged if there is a further decrease in Initiative positions. However, support from management for the positions and for creating a positive culture for the clinical education of pre-entry students was also reported in survey responses from allied health workforce and managers. This management recognition of the role public health services play in student education within an environment of changing service priorities and increasing fiscal pressures is positive.

Changing healthcare context. All participant groups expressed concern about the rate of change in health care delivery and service contexts negatively affecting placement offers. University and allied health workforce participant groups also expressed awareness of a growing negative perception related to increasing demand for placement offers coupled with service changes. To manage this perceived barrier to sustainability, participants reported the importance of collaborations to placement innovation, such as innovations to placement models matched to the care environment,^{2,10,37} as well as alternative curriculum-embedded clinical education experiences (e.g. university-based simulation).^{38,39}

Increasing demand for placement offers. The importance of messaging that placement provision is not the sole responsibility of public health services but rather that it is a 'whole-of-profession' responsibility was suggested by respondents as a strategy to overcome the reported negative perceptions related to university student cohort growth. Profession-specific collaboration for placement offers, allocation and negotiations was valued, with a reported perception that any reduction in profession-specific governance for student education would negatively affect placement provision. Changes to the organisational structures of HHSs and, at times, a lack of recognition of the statewide profession-specific governance for the Initiative positions were seen to potentially contribute to reduced placement provision. There is little literature exploring the role of profession-specific collaborations, leadership and governance directly on placement capacity building. However, it is evident from this review's outcomes that an Initiative underpinned by jurisdiction-wide profession-specific leadership and governance, and supported by industry and university collaborations, has increased and enabled sustained placement offers and capacity building within health services.

Conclusion

Sustainability of effort to meet the increasing demand for placements in an environment of expanding university cohorts and changes in health service delivery models and contexts is an ongoing challenge. The findings from this study indicate that it will require ongoing outcome data collection and reporting, sustained support to dedicated allied health clinical education roles, their statewide leadership and profession-specific governance, and management support for clinical placement provision in general. Continuation of statewide approaches, including clinical education roles and networks

that enhance efficiency, minimise duplication and streamline communication with the universities, enables sustained effort to meet placement demand. Partnerships, collaboration and profession-specific responses to meeting placement demand align with the need for the specificity of placement enquiry from the university sector for its student cohorts.

Dedicated clinical education positions were highly valued by all stakeholder groups. Because a comparable financial investment to this Initiative is unlikely in the foreseeable future, health service allied health managers will need to allocate resources to support any future growth of a dedicated clinical education workforce. The support of allied health staff and managers to the current Initiative and clinical placements in general has enabled the adaptation of existing Initiative-funded positions to meet local HHS needs while sustaining placement offers. This suggests that flexibility and responsiveness underpinned by collaboration, information and resource sharing within and across professions, as well as between all stakeholders, may be the key to sustaining placement provision in an increasingly challenging healthcare environment.

Competing interests

The authors declare that they have no competing interests.

Acknowledgements

The authors acknowledge the allied health professions' leadership groups who developed and supported the pre-entry placement capacity building activities required for the Initiative. The appointed clinical educators who have taken on the challenge of building clinical placement capacity within this Initiative are also acknowledged, as are their allied health directors, profession-specific discipline chairs, the statewide clinical education program managers and university partners for their support of and collaboration with these positions. Julie Hulcombe, Chief Allied Health Officer, and Belinda Gavahan of the Allied Health Professions' Office of Queensland are also acknowledged for their support and manuscript review. This research did not receive any specific funding.

References

- McAllister L, Nagarajan S. Accreditation requirements in allied health education: strengths, weaknesses and missed opportunities. *J Teach Learn Grad Employ* 2015; 6: 2–24. doi:10.21153/jtlge2015vol6no1art570
- Hamilton A, Copley J, Thomas Y, Edwards A, Broadbridge J, Bonassi M, Fitzgerald C, Newton J. Responding to the growing demand for practice education: are we building sustainable solutions? *Aust Occup Ther J* 2015; 62: 265–70. doi:10.1111/1440-1630.12181
- Gustafsson L, Brown T, McKinstry C, Caine A-M. Practice education: a snapshot from Australian university programmes. *Aust Occup Ther J* 2017; 64: 159–69. doi:10.1111/1440-1630.12337
- Romig BD, Tucker AW, Hewitt AM, O'Sullivan Maillet J. The future of clinical education: opportunities and challenges from allied health deans' perspective. *J Allied Health* 2017; 46: 43–55.
- Larkin H, Watchorn V. Changes and challenges in higher education: what is the impact on fieldwork education? *Aust Occup Ther J* 2012; 59: 463–66. doi:10.1111/1440-1630.12002
- McBride L-J, Fitzgerald C, Morrison L, Hulcombe J. Pre-entry student clinical placement demand: can it be met? *Aust Health Rev* 2015; 39: 77–81. doi:10.1071/AH14156
- Rodger S, Webb G, Devitt L, Gilbert J, Wrightson P, McMeeken J. Clinical education and practice placements in the allied health professions: an international perspective. *J Allied Health* 2008; 37: 53–62.
- State of Queensland (Queensland Health). Queensland Health clinical placement capacity and offers of clinical placements for allied health professions: a guide for Hospital and Health Services. Brisbane: Queensland Government. 2014. Available at: https://www.health.qld.gov.au/_data/assets/pdf_file/0012/151032/placement-guide.pdf [verified 20 August 2018].
- Patton N, Higgs J, Smith M. Using theories of learning in workplaces to enhance physiotherapy clinical education. *Physiotherapy Theory and Practice* 2013; 29: 493–503. doi:10.3109/09593985.2012.753651
- Moore A, Morris J, Crouch V, Martin M. Evaluation of clinical educational models: comparing 1 : 1, 2 : 1, and 3 : 1 placements. *Physiotherapy* 2003; 89: 489–501. doi:10.1016/S0031-9406(05)60007-7
- Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006; 3: 77–101. doi:10.1191/1478088706qp063oa
- Health Workforce Australia. Health workforce 2025. Doctors, nurses and midwives, Volume 1 March 2012. 2012. Available at: [https://submissions.education.gov.au/forms/archive/2015_16_sol/documents/Attachments/Australian%20Nursing%20and%20Midwifery%20Accreditation%20Council%20\(ANMAC\).pdf](https://submissions.education.gov.au/forms/archive/2015_16_sol/documents/Attachments/Australian%20Nursing%20and%20Midwifery%20Accreditation%20Council%20(ANMAC).pdf) [verified 6 August 2018].
- Nancarrow SA, Young G, O'Callaghan K, Jenkins M, Philip K, Barlow K. Shape of allied health: an environmental scan of 27 allied health professions in Victoria. *Aust Health Rev* 2017; 41: 327–35. doi:10.1071/AH16026
- Kemp D, Norton A. Review of the demand driven funding system. Australian Government Department of Education and Training; 2014. Available at: https://docs.education.gov.au/system/files/doc/other/review_of_the_demand_driven_funding_system_report_for_the_website.pdf [verified 6 August 2018].
- Thomas Y, Dickson D, Broadbridge J, Hopper L, Hawkins R, Edwards A, McBryde C. Benefits and challenges of supervising occupational therapy fieldwork students: supervisors' perspectives. *Aust Occup Ther J* 2007; 54: S2–S12. doi:10.1111/j.1440-1630.2007.00694.x
- Sealey RM, Raymond J, Groeller H, Rooney K, Crabb M, Watt K. Supporting placement supervision in clinical exercise physiology. *Asia Pac J Coop Educ* 2015; 16: 53–69.
- Davies R, Hanna E, Cott C. 'They put you on your toes': physical therapists' perceived benefits from and barriers to supervising students in the clinical setting. *Physiother Can* 2011; 63: 224–33. doi:10.3138/ptc.2010-07
- Overton A, Clark M, Thomas Y. A review of non-traditional occupational therapy practice placement education: a focus on role-emerging and practice placements. *Br J Occup Ther* 2009; 72: 294–301. doi:10.1177/030802260907200704
- Casares GS, Bradley KP, Jaffe LE, Lee GP. Impact of the changing health care environment on fieldwork education: perceptions of occupational therapy educators. *J Allied Health* 2003; 32: 246–51.
- Armstrong BK, Gillespie JA, Leeder SR, Rubin GL, Russell LM. Challenges in health and health care for Australia. *Med J Aust* 2007; 187: 485–89.
- ClinEdAus. The Queensland Physiotherapy Placement Collaborative. 2018. Available at: <http://www.clinedaus.org.au/topics-category/physiotherapy-55> [verified 2 April 2018].
- The University of Queensland. Partnership with UOTPENQ. 2017. Available at: <https://otpeccq.group.uq.edu.au/about-us/partnership-uotpenq> [verified 4 April 2018].
- Ladyshewsky R. Peer-assisted learning in clinical education: a review of terms and learning principles. *J Phys Ther Educ* 2000; 14: 15–22. doi:10.1097/00001416-200007000-00004
- Nicole M, Raymond J, Penman M, McAllister L. 12 tips for establishing a hospital based student-led service. *MedEdPublish* 2016; 5: 27. doi:10.15694/mep.2016.000113
- Patterson F, Fleming J, Marshall K, Ninness N. Student perspectives of a student-led groups program model of professional practice education

- in a brain injury rehabilitation unit. *Aust Occup Ther J* 2017; 64: 391–9. doi:10.1111/1440-1630.12382
- 26 Price D, Whiteside M. Implementing the 2:1 student placement model in occupational therapy: strategies for practice. *Aust Occup Ther J* 2016; 63: 123–9. doi:10.1111/1440-1630.12257
- 27 Hanson DJ, Deluliis ED. The collaborative model of fieldwork education: a blueprint for group supervision of students. *Occup Ther Health Care* 2015; 29: 223–39. doi:10.3109/07380577.2015.1011297
- 28 Dancza K, Warren A, Copley J, Rodger S, Moran M, McKay E, Taylor A. Learning experiences on role-emerging placements: an exploration from the students' perspective. *Aust Occup Ther J* 2013; 60: 427–35. doi:10.1111/1440-1630.12079
- 29 Furness L, Pighills A, Ducat W, Tynan A. Implementation of a new model of clinical education for regional occupational therapy student clinical placements. *Aust Health Rev* 2017; 41: 546–52. doi:10.1071/AH16044
- 30 Patterson F, Fleming J, Doig E, Griffin J. Participant evaluation of an inpatient occupational therapy groups programme in brain injury rehabilitation. *Aust Occup Ther J* 2017; 64: 408–18. doi:10.1111/1440-1630.12392
- 31 Fortune T, McKinsty C. Project-based fieldwork: perspectives of graduate entry students and project sponsors. *Aust Occup Ther J* 2012; 59: 265–75. doi:10.1111/j.1440-1630.2012.01026.x
- 32 Rodger S, Thomas Y, Dickson D, McBryde C, Broadbridge J, Hawkins R, Edwards A. Putting students to work: valuing fieldwork placements as a mechanism for recruitment and shaping the future occupational therapy workforce. *Aust Occup Ther J* 2007; 54: S94–S97. doi:10.1111/j.1440-1630.2007.00691.x
- 33 Independent Hospital Pricing Authority. Pricing framework for Australian public hospital services 2018–19. 2017. Available at: https://www.ihpa.gov.au/sites/g/files/net4186/f/publications/pricing_framework_for_australian_public_hospital_services_2018-19.pdf [verified 4 April 2018].
- 34 Queensland Government (Queensland Health). Queensland health service agreements. Brisbane: State of Queensland (Queensland Health). 2018. Available at <https://www.health.qld.gov.au/system-governance/health-system/managing/agreements-deeds> [verified 5 April 2018]
- 35 Bowles K, Haines T, Molloy E, Maloney S, Kent F, Sevenhuysen S, Tai J. The costs and benefits of providing undergraduate student clinical placements for a health service organisation: An Evidence Check rapid review brokered by the Sax Institute for the Hunter and Coast Interdisciplinary Training Network through the Health Education Training Institute (HETI). December 2014. Available at: <https://www.saxinstitute.org.au/publications/evidence-check-library/the-costs-and-benefits-of-providing-undergraduate-student-clinical-placements/> [verified 3 August 2018].
- 36 Paxon Partners. Independent Hospital Pricing Authority teaching, training and research costing study project report July 2016. 2016. Available at: https://www.ihpa.gov.au/sites/g/files/net636/f/publications/trr_costing_study_final_report_for_publication.pdf [verified 3 August 2018].
- 37 Roberts NJ, Brokington S, Doyle E, Pearce LM, Bowie AJ, Simmance N, Evans S, Crowe TC. Innovative model for clinical education in dietetics. *Nutr Diet* 2009; 66: 33–8. doi:10.1111/j.1747-0080.2008.01315.x
- 38 Bethea DP, Castillo DC, Harvison N. Use of simulation in occupational therapy education: way of the future? *Am J Occup Ther* 2014; 68: S32–9. doi:10.5014/ajot.2014.012716
- 39 Bennett S, Rodger S, Fitzgerald C, Gibson L. Simulation in occupational therapy curricula: a literature review. *Aust Occup Ther J* 2017; 64: 314–27. doi:10.1111/1440-1630.12372