Factors influencing provision of clinical placements for health students: A scoping review

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Abstract

Introduction: Clinical placements for students completing health degrees are vital for meeting work-integrated learning requirements and enabling students to develop a broad range of professional capabilities in authentic settings. Understanding the factors that influence the provision of clinical placements for health students from the perspectives of those providing the placements is essential, not only to sustain existing resources but also to expand opportunities to meet growing placement demand.

Methods: A scoping review of articles with a focus on health student clinical placements within the international context, published between 2000–2020, was facilitated using seven databases, including Google Scholar and other sources.

Results: A total of 2,283 records were identified. After removal of duplicates, 1,159 records were screened based on the title and abstract. Full-text review was conducted on 93 articles, and 48 of these publications were included in the final scoping review. Data from these articles were charted and four major themes emerged to illuminate factors that influence the provision of clinical placements for health students: institutional, personal, university engagement and student capability.

Conclusion: Multiple factors influence the provision of clinical placements for health students from the perspectives of those who provide the placements. Understanding these factors is important to sustain existing resources and inform planning to increase placement provision sustainably into the future. From this scoping review, a clear gap in the literature is the perspectives and experiences of two distinct groups: health service managers and health clinicians who choose not to participate in clinical placement provision. Input from these key personnel is essential to inform future research in this field.

Keywords: clinical education; placement provision; students

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Introduction

The provision of clinical placements is a vital component in the education of future health professionals. Clinical placements enable engagement and immersion in professional practice, which helps to build students' professional identities, knowledge and skills (Edwards et al., 2004; Hall et al., 2012; Hills et al., 2019). Clinical placements for health students are critical to enabling education providers to meet students' professional registration requirements (Edwards et al., 2004; Hall et al., 2012). Enabling appropriate work-integrated learning experiences is intrinsic to educating the future health workforce and ensuring that community needs are met (McBride et al., 2015; WHO, 2011). To meet the future health workforce demands, universities are offering a wider range of health professional courses and accepting greater numbers of students into these courses (McBride et al., 2015). Whilst greater numbers of health professional students will assist with addressing health workforce issues, the increased placement demands and competition for placements risk saturation of placement sites and burnout of clinical supervisors (Barnett et al., 2012). The importance of clinical placements for both universities and health service organisations is recognised in the literature (see Bowles et al., 2014). Current literature predominately focuses on the student perspective of clinical placement quality and experience (see Annear et al., 2016; O'Brien et al., 2019; Papastavrou et al., 2010). What is currently less clear in the literature are the factors that influence the provision of clinical placements for health students from the perspectives of those who provide the clinical placement opportunities. The value of this scoping review is the overview it provides on the available literature containing the perspectives of those providing the clinical placement opportunities. These perspectives are important to understand if clinical placements are to be both sustained and expanded to meet future demand.

In order to illuminate the breadth of factors influencing clinical placement provision for health students from the perspectives of those providing the placement opportunities, this scoping review followed the five-stage process outlined by Arksey and O'Malley (2005). This five-stage process was adopted as it is evidence based and provided a logical and coherent framework to structure the review. Scoping reviews map relevant literature on a particular topic of interest (Arksey & O'Malley, 2005). Whilst this process does not necessarily assess the quality and methods of included studies, it does allow for the literature to be reviewed in a process that demonstrates transparency and rigour (Arksey & O'Malley, 2005).

The intent of this scoping review is to identify existing challenges and opportunities for both sustaining current provision options and expanding clinical placement potential to meet future health workforce needs. This scoping review uniquely reviews the literature containing perspectives of those providing clinical placement opportunities with the focus on influential factors. These perspectives are important considerations when determining the factors that influence provision of clinical placements. It must be noted that clinical

placements for health students can vary considerably between professions with respect to models of facilitation, duration and requirements. It is not the intent of this scoping review to unpack the nuanced detail of clinical placements relevant to specific health professions but rather to provide an overview of the collective influential factors reported in the literature from a broad range of health disciplines. Health students, for the purposes of this scoping review, are defined as "undergraduate" or "pre-registration", representing a broad range of health disciplines. Postgraduate health students were not included in this review.

Methods

This scoping review followed the five-stage process as outlined by Arksey & O'Malley (2005).

Stage 1: Identifying the research question

A broad research question was defined initially to outline the intent of the scoping review and enable an adequate number of results to be obtained:

> *What are the factors that influence provision of clinical placements for health students?*

Secondary questions were defined to sharpen the focus of the scoping review:

> *What are the factors that limit, enable and sustain the provision of clinical placements for health students?*
>
> *Who is providing these perspectives on provision of clinical placements for health students?*

Stage 2: Identifying relevant studies

A comprehensive search of the literature was undertaken (August, 2020) using broad inclusion criteria. Databases included CINAHL Plus, Academic Search Complete, Education Research Complete, Health Source: Nursing/Academic Edition, Psychology and Behavioural Sciences Collection & SocINDEX. The range of databases accessed ensured a comprehensive review of published literature. In addition, the first 100 search results in Google Scholar were sourced to capture articles that may have been missed in the other database searches. Given the research questions, it was deemed that the listed databases were most appropriate to identify literature relevant to this scoping review. Additionally, a review of the reference lists of each of the included studies was undertaken to further expand the search of the literature to ensure results were comprehensive.

The search terms used for this scoping review included ("pre-registration" OR "pre-qualification" OR "clinical placement" OR "clinical education" OR "student placement" OR "clinical supervision") AND ("supervisors" OR "clinicians" OR "clinical educators" OR "clinical supervisors") AND ("attitudes" OR "perspective" OR "perception").

Literature selected for inclusion in this scoping review was limited to full text availability and year date ranges 2000–2020. This was done to ensure a comprehensive review of the literature over 20 years. Additionally, only academic journal articles published in English language were included and grey literature was not included.

Stage 3: Study selection

Title and abstracts were reviewed by the principal author (BS) to identify articles that met the inclusion criteria (Table 1). When literature and systematic reviews were identified for inclusion, reference lists of these reviews were cross matched against other articles identified for inclusion. If duplication occurred within these reviews, the duplicates were omitted from inclusion in this scoping review. To ensure clarity and facilitate repeatability of the process of study selection for this scoping review, a PRISMA flow diagram has been used. The addition of the PRISMA flow diagram complements the Arksey and O'Malley (2005) scoping review process as it provides a reporting mechanism, clearly and transparently demonstrating the study selection process undertaken. The Arksey and O'Malley (2005) five-stage process provided the framework that guided the entire review process.

Table 1

Scoping Review Inclusion and Exclusion Criteria

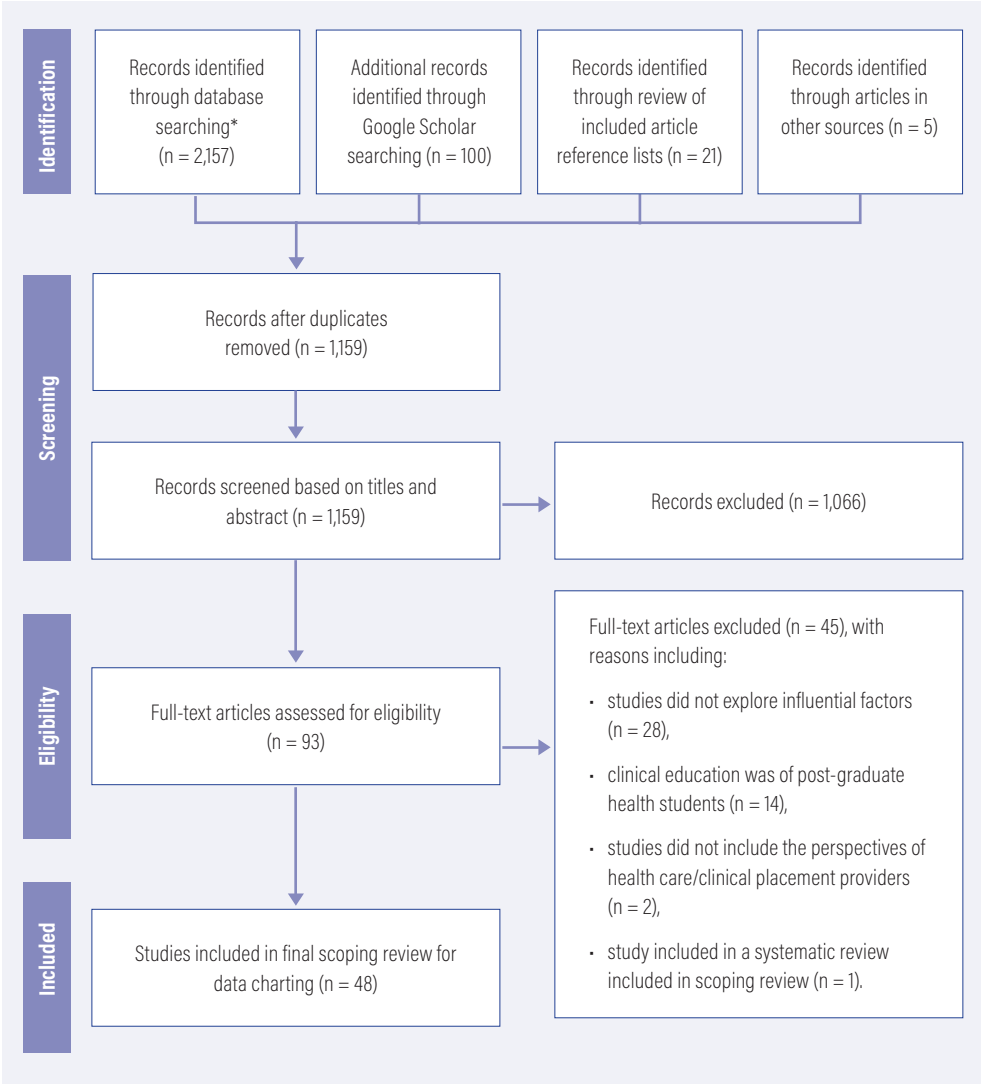
Inclusion	Exclusion
Academic peer-reviewed journal articles published 2000–2020.	Grey literature and conference presentations
Studies including healthcare/clinical placement providers' perspectives (clinicians and health service managers) on the influential factors for the provision of clinical education/clinical placements for health students	Studies not published in English language
Health disciplines of medicine, nursing, midwifery, dentistry, oral health, pharmacy, paramedicine and allied health (physiotherapy, podiatry, medical radiation science, occupational therapy, social work, speech pathology, psychology, audiology, nutrition and dietetics)	Studies where full text was not available
Studies including clinical education/clinical placement provision for health students/degrees (undergraduate/pre-registration)	Studies included in other studies (e.g., systematic reviews) selected for inclusion

Study selection was conducted independently by the principal author as a component of the literature review for higher degree by research doctoral studies.

The intent of this scoping review was to maintain a broad perspective, including all disciplines that participate in the clinical education of undergraduate or pre-registration health students across all health settings internationally.

Figure 1

PRISMA Flow Diagram of Study Selection



* Databases searched included CINAHLPlus with Full Text, Academic Search Complete, Education Research Complete, Health Source: Nursing/Academic Edition, Psychology and Behavioral Sciences Collection, SocINDEX with Full Text.

Stage 4: Charting the data

During this phase of the process, data from the studies were synthesised relevant to the scoping review questions and intended outcome of the review (Arksey & O'Malley, 2005). Data charting included authors, study participants, disciplines of focus, aim/

purpose of the study, methodology/methods, primary outcomes and key findings related to the scoping review.

Stage 5: Collating, summarising, and reporting the data

The outcomes and key findings were collated from studies that met the inclusion criteria. Quantitative data was reported as per the scoping review analysis principles outlined by Arksey & O'Malley (2005) and Colquhoun et al. (2014) to illustrate the extent, nature and distribution of the data (see Arksey & O'Malley, 2005). Qualitative analysis involved the principal author reading each of the articles in depth and re-reading discussion sections to identify specific key findings. A summary paragraph relevant to each of the articles is included in the final column of the table of the charted articles included in the scoping review. This summary text was uploaded to NVivo to facilitate thematic analysis. Thematic analysis occurred following the six-phase process of thematic analysis outlined by Braun and Clarke (2006). The principal author (BS) coded the text and progressively refined themes using inductive methods until four major themes were identified (see Table 2 for theme refinement during thematic analysis). To enhance the rigour of qualitative analysis, a coauthor (CR) independently reviewed the summary paragraphs to identify key themes, with results discussed and confirmed between these two authors. This additional perspective was useful in determining relevant terms for each of the four major themes and contributing to the breadth of factors included for discussion. Data was managed using Endnote (Clarivate Analytics, 2013), NVivo (QSR International Pty Ltd., 2020) and Excel (Microsoft Corporation, 2018) software stored on a secure drive.

Table 2

Theme Refinement During Thematic Analysis

Initial Themes	Condensed Themes	Major Themes
Support	Organisational structure and culture	Institutional
Recruitment/retention strategy	Benefits/positive motivators	
Job satisfaction	Barriers/adverse influences	
Growth and development	Workloads and time	
Complementary benefits	Context considerations	
Agency		
Competing interests/demands		
Clients/patients		
Space and resources		
Enjoyment of supervision	Intrinsic	Personal
Personal attributes	Personal and professional development	
Knowledge transfer	Specialised practice	
Positive contributions		
Exposure		

Initial Themes	Condensed Themes	Major Themes
Communication	Relationships	University engagement
Consistency	Support and training	
Remuneration and recognition	Positive drivers	
Variability	Negative detractors	
Skills	Preparation	Student capability
Initiative	Attitude	
Time impacts	Positive impacts	
Contributions	Negative perceptions	
Time		
Behaviour		
Diversity		

Results

A total of 2,283 articles were identified from the literature search. The titles and abstracts of 1,159 articles were reviewed after the removal of duplicates. The full text of 93 articles were reviewed; 48 studies met the inclusion criteria. Data from these 48 articles were charted (see Table 3), as described in Stage 4 of methods (see Figure 1 for study selection process).

Of the 48 articles included in this scoping review, 19 (39.6%) were published from 2000–2010, and 29 (60.4%) were published from 2011–2020, indicating a modest increase in interest in the topic globally across the last 10 years. A majority (19) of the studies were conducted in Australia (39.6%), seven in the United States of America (14.6%), six multinational (12.5%) and five in the United Kingdom (10.4%). Medicine was the primary discipline of focus, represented in 13 (27.1%) of the articles. Heath disciplines other than medicine included multidisciplinary (9; 18.8%), physiotherapy (9; 18.8%), nursing (4; 8.3%), occupational therapy (3; 6.3%), social work (3; 6.3%), nutrition and dietetics (3; 6.3%), speech pathology (2; 4.2%), podiatry (1; 2.1%) and midwifery (1; 2.1%).

The majority of articles (42) focused on the perspectives of clinicians involved in clinical placements (87.5%). Seven (14.6%) of the included studies also considered the perspectives of students in addition to clinicians involved in the clinical placement. Three (6.3%) studies included the perspectives of health service managers, and only one article (2.1%) included the perspectives of clinicians not involved in the clinical placement experiences as targeted research participants. None of the included studies considered the perspectives of the patients or clients as study participants.

Table 3

Charted Studies Included in Scoping Review (Grouped by Discipline)

Author/s Location	Study Participants	Discipline/s of Focus	Aim/Purpose of Study	Methodology (Methods)	Primary Outcomes	Key Findings Related to Scoping Review
Blitz et al. (2014) South Africa	Clinical specialists teaching medial students	Medicine	Explore implementation of a rural clinical school and what this meant for full-time practising clinicians to adapt and change teaching requirements	Qualitative (Semi-structured interviews)	Four themes were identified including attitudes towards medical education model, uncertainty and insecurity as a teacher, emergence as a teacher and sense of responsibility.	Clinicians need to be adequately prepared for the process and requirements of clinical education and teaching. The impacts of how clinical education and teaching would impact service delivery and patient care was reported as considerations and potential barriers. Giving back to the profession and a sense of responsibility was reported as motivational factor.
Crampton et al. (2013) International	Literature review of undergraduate clinical placements in underserved areas	Medicine	Determine the strengths and weaknesses for medical students and supervisors of community placements in underserved areas	Systematic review	Four main themes were developed, including student performance, student perceptions, career pathways and supervisor experiences.	Student exposure and the influence this has on their recruitment and retention to locations or areas of practice was noted as an influential factor to placement provision. Motivation included both personal desire and enjoyment of the role. Giving back to the profession was also noted. Uncertainty of curriculum and better preparation of students contributed to any negative perceptions of placement provision as did time.
Dahlstrom et al. (2005) Australia	Senior clinicians	Medicine	Assess motivations of senior medical clinicians to teach medical students	Mixed methods (Q methodology)	Four factors were identified, with one being motivation and three being impediments to teaching.	Intrinsic motivation, such as altruism, intellectual stimulation, personal skills and truth seeking were identified as motivational factors. Impediments to clinical teaching were a lack of involvement in course design, clinical load, responsibilities of clinicians and viewing teaching as a waste of time.

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Dybowski & Harendza (2014) Germany	Clinical teachers	Medicine	Identify factors that influence motivation of hospital physicians to teach	Qualitative (Focus groups)	Three multifaceted categories influence motivations to teach, including the teachers themselves, the students and the medical faculty.	Personal motivation to participate in clinical placement provision included enjoyment of the role and regarding teaching as an occupational duty. Student attitudes and application to clinical education were viewed as an influential factor, with poor attributes and behaviours reported to deter motivation. Time requirements and workload pressures were also identified to influence motivation as they can increase stress and reduce teaching enjoyment.
Gillies et al. (2005) United States of America	Physicians	Medicine	Determine the factors that contribute to retention of community-based sites and the physicians at sites in a long running medical clerkship	Qualitative (Focus groups)	Six key themes resulted, including participation in clerkships due to the opportunity to promote family medicine to students, valuing the role of teaching, leadership style, ownership of clerkship, resource availability and challenges.	Student promotion of career opportunities impacting recruitment of practices was regarded as a motivational factor to placement provision. Clinicians valued the opportunity to give back to the profession and educate the next generation. Value was assigned to consistent and familiar contact from universities, establishing long-term relationships that facilitated placement provision. Financial remuneration was reported as a way of assisting to offset any financial losses accumulated whilst teaching students. Time constraints were noted as a barrier to develop the skills necessary for clinical teaching.

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Henderson et al. (2018) Australia	General practitioner supervisors	Medicine	Explore general practitioner supervisors' perspectives of positive training experiences with medical students on longitudinal community-based clinical placements	Qualitative (Semi-structured interviews)	Themes identified were attributed to individuals or organisations. Themes included general practitioners, students, practices and educational institution support.	Personal attributes contributing to placement provision motivation were enjoyment of the role of teaching, flexibility and adaptability with clinical education approach, being proactive and involving others as necessary in the clinical education process. Keen motivated students were desirable traits. Client or patient willingness to include students in clinical consultations was also identified as a requirement. Organisations and staff need to be supportive of placement provision. Open and clear contact and communication for educational institutions was deemed essential. Challenges identified included time pressures and concerns over providing students with appropriate clinical learning opportunities.
Hudson et al. (2012) Australia	General practitioners	Medicine	Determine if medical students on long-term placements are a financial help or hindrance to supervisors	Mixed methods (Semi-structured interviews and practice data)	Financial turning point for practices was determined to be 1–2 months when students were not a burden on practices and became beneficial. Cost neutral point was approximately 3 months.	The study found that 66% of study participants considered long-term placements to be financially neutral or favourable, whilst 19% reported negative financial impacts attributed to reduction in patient throughput, inadequate financial incentives and time spent on activities such as student assessments. Some study participants considered the financial costs were outweighed by the personal satisfaction of participation in clinical education.

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Norman & Dogra (2014) United Kingdom	Clinical educators	Medicine	Explore the commitment, experiences and attitudes of clinical teachers of undergraduate and postgraduate medical students	Mixed methods (Survey consisting of open and closed questions)	Teachers were found to be prepared for teaching and fulfilled through participation. Time restrictions were noted with completion of teaching activities found to occur in participants' own time. Despite a perceived low level of support and incentives, participants still felt valued in their education role.	Shortages of time impacted the clinical placement provision and education process. Primary barriers were reported as time; a lack of incentives, rewards, and recognition for teaching; poor resources; as well as low confidence in the curriculum being taught.
Scott & Sazegar (2006) Canada	Community physicians	Medicine	Examine the reasons clinicians gave for teaching or not teaching medical students in their practices	Quantitative (Survey)	Physicians who teach students did so out of enjoyment and wanting to participate. Physicians who did not reported practice constraints as well as other non-teaching related challenges.	A lack of awareness of teaching possibilities was reported as a barrier to participation in clinical placement provision by non-teachers. Teachers of medical students valued enjoyment of passing on knowledge, student enthusiasm, remuneration and other benefits such as university library access as factors that motivated participation. The practice situation, such as space, time and patients, was frequently reported as a barrier to participation. Students' perceptions of clinical educators as well as other non-teaching challenges were also noted as barriers to participation.

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Starr et al. (2003) United States of America	Community preceptors	Medicine	Determine how community physicians think of themselves as teachers and the factors that contribute to teacher identity	Qualitative (Focus groups)	Seven themes emerged, including intrinsic satisfaction, knowledge and skill of teaching, belonging to a group of teachers, receiving rewards, a sense of being a physician means being a teacher, responsibility to teach medicine and sharing clinical expertise.	Clinical placement provision was viewed as an extension to the normal work role. Rewards were perceived to increase clinicians' engagement in clinical placement provision, with acknowledgement and support being highly valued. Barriers to clinical placement provision were associated with increased pressures due to competing clinical responsibilities and productivity demands impacting the amount and quality of clinical education delivered.
Stone et al. (2002) United States of America	Clinical physicians	Medicine	Examine the views of clinical teachers to identify the characteristics attributable to being a teacher	Qualitative (Semi-structured interviews)	Themes revealed in the study included underlying humanitarianism, benefit appreciation, teaching drawbacks, adult education principle familiarity and self-image as a teacher.	Benefits of participation reported to outweigh drawbacks. Clinical teaching was reported to benefit clinicians through updating clinical knowledge. Clinical teachers reported participation out of enjoyment of the role and finding it to be a rewarding experience. Barriers or drawbacks to placement provision were increased time pressures on clinicians and adding inconvenience to workdays.
Sturman et al. (2011) Australia	General practitioners	Medicine	Inform strategies for recruitment, retention, training and support for teaching general practices through understanding the general practitioner clinical teacher experience	Qualitative (Semi-structured interviews)	Rewards identified included intellectual stimulation, satisfaction of teaching and well as the company of young enthusiastic students. Costs and challenges identified included time management issues, patient concerns and mental fatigue.	Academic titles and government bonuses were reported as reward or recognition strategies that were perceived as enabling factors. Having space and provisions to accommodate students with support from staff and colleagues was also a requirement. Time management, and the effects placement provision has on this, was reported as the largest cost and challenge. Poor student preparation and attitudes were perceived as a barrier. The clients or patients of a service have potential to influence if student participation is appropriate or not.

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Widyandana et al. (2011) Indonesia	Pre-clinical medical students and clinical supervisors	Medicine	Investigate which clinical setting (tertiary, secondary, or primary health care) is most appropriate for pre-clinical medical students to practise their skills	Mixed methods (Survey and semi-structured interviews)	Primary healthcare centres were reported to be well equipped to train pre-clinical students and had available time for teaching, adequate physical facilities, and equipment with suitable clients for students to learn with.	The context and healthcare setting can influence the suitability and willingness of clinicians to participate in clinical placement provision. Patient loads, patient types and time constraints also factor into placement provision capacity. Universities were regarded to play a primary role in the training of clinicians as supervisors.
Gillieatt et al. (2014) Australia	Clinical educators	Multidisciplinary (allied health, nursing and medicine)	Evaluate a supervision training model to determine if it expanded clinical training opportunities and increased competence and available clinical educators	Mixed methods (Pre and post evaluations)	Completion of the training model improved knowledge, skills and value of clinical education. Completion also increased willingness to accept students and provide clinical placements.	Offering clinicians training opportunities on clinical supervision has potential to improve capability and capacity for clinicians to be involved in clinical placement provision for students. Clinicians were motivated to attend the training opportunity due to desire to increase their knowledge and improve their skill and confidence in clinical placement provision. Improved understanding of the clinical placement provision process was reported to increase clinician motivation for participation.
Latessa et al. (2007) United States of America	Community-based preceptors	Multidisciplinary (physicians, pharmacists, advanced practice nurses and physician assistants)	Measure satisfaction and motivation of community-based preceptors	Quantitative (Surveys)	Participants were satisfied with the preceptoring experience and were highly likely to continue to precept in the future 5 years. Incentives were valued, however intrinsic satisfaction was rated as a higher motivational factor.	Students had a positive or very positive influence on preceptors' overall job satisfaction. Providing practice exposure to students, giving back to the profession, intellectual stimulation and being a role model were all identified as intrinsic motivational factors. Credits for teaching, access to online library resources, continuing professional development opportunities and university academic appointments were noted as extrinsic motivational factors.

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Maloney et al. (2013) Australia	Allied health professionals	Multidisciplinary (physiotherapy, occupational therapy, speech pathology, dietetics, podiatry and psychology)	Investigate allied health professionals' experiences of supervising students in private and public health settings in rural locations	Mixed methods (Surveys with open- and closed-answer questions)	Enablers to clinical placement provision were reported as the positive experiences associated with participation, such as increased job satisfaction.	Enablers or benefits were increased job satisfaction through participation in clinical placement provision. Students were also reported to benefit the service whilst on placement. Receiving adequate information from universities impacts overall satisfaction for placement providers, as inadequate communication was perceived as a barrier. A commonly reported barrier was time, especially for the private sector. Incentives such as financial remuneration or accreditation points were reported as a strategy to increase placement provision to acknowledge the time required.
O'Brien et al. (2014) Australia	Nurse and midwife preceptors	Multidisciplinary (nursing and midwifery)	Evaluate perceptions of nurses and midwives involved in preceptoring undergraduate students	Quantitative (Descriptive cross-sectional multisite surveys)	Of the survey's four subscales, differences were noted between those who had training in clinical preceptoring and those who had not. Differences were also recorded for those who had access to university facilitators and those without.	Preceptors were less satisfied with their role in clinical education when challenged by unmotivated and difficult students. Challenging students was reported to require more time and detract from patient care and routine daily work practices. Preceptors were more satisfied when university facilitators were accessible. Personal motivation was reported to drive participation in training and clinical education opportunities for preceptors. This correlated with a willingness to participate in placement provision.

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O'Brien et al. (2017) United States of America	Employers participating in clinical education provision	Multidisciplinary (allied health)	Seek opinions and perspectives of healthcare employers to understand importance, benefits, obstacles and issues relating to placement provision and identify opportunities to improve clinical education partnerships	Qualitative (Semi-structured interviews)	Benefits identified included working with students and employment outcomes for the organisation. Students offer enthusiasm, energy and currency of knowledge. Providing placements offers staff leadership opportunities and the opportunity for personal development. Staff time and education program variation as well as student preparation were identified as barriers.	Longer clinical placements as well as payments as incentives for providing clinical placement opportunities were identified as factors that would impact future placement provision. Organisational resources, such as budgets and space, were also considerations for organisations offering clinical placement opportunities. Concerns over students being involved in clinical placements were raised from both a legal and liability perspective.
Rodger et al. (2008) International	Editorial	Multidisciplinary (audiology, occupational therapy, physiotherapy and speech pathology)	Exploration of clinical education and placements for allied health professions from international perspectives	Editorial and literature summation informed by authors' experiences	Internal perspectives were presented on clinical education and placement provision. Impacts of changes to the health and education sectors and the impacts these have for clinical placement provision were also explored.	Challenges to clinical placement provision stem from staffing shortages, funding and changes to health and education sectors. Workloads of clinicians were also reported to be a barrier to clinical placement provision. Benefits of clinical placement provision include transfer of knowledge, recruitment impacts and professional and personal growth. Students offer organisations benefits, including participation in additional tasks such as research or quality assurance projects. These were reported as enablers of clinical placement provision. Suggestions were made for improvements or enhanced capacity, including offering incentives and recognition, such as payments, postgraduate training opportunities and access to university resources. Other suggestions included reducing clinicians' workloads when hosting students and greater support from university academic staff.

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Shannon et al. (2006) Australia	Clinical preceptors	Multidisciplinary (medicine, allied health and nursing)	Establish the influential factors of a professional's decision to precept students	Mixed methods (Survey with open-ended questions)	Decision to precept students included valuing individual contributions to the growth in student's knowledge and skills, promoting career options to students, enjoyment of the role and keeping up to date with health developments and literature.	Preceptors primarily chose to precept because of their enjoyment of teaching, witnessing student growth in knowledge and skills and promotion of career opportunities. Communication between academics and clinicians providing clinical placement was noted as an area for improvement. Financial incentives were suggested to acknowledge the time commitment and productivity losses associated with preceptoring.
Strohschein et al. (2002) Location not specified	Opinion/editorial	Multidisciplinary (physical therapy and other allied health disciplines)	Identify areas of need within clinical education and describe models and tools used in clinical education and how these tools assist with meeting clinical education needs	Opinion/ editorial	Synthesis of the literature on the topic revealed clinical education in physical therapy stems from seven primary needs. Ten models were reported to be in clinical placement experiences.	Time and financial constraints within the healthcare system create issues for placement provision. Tension is created between providing client or patient care and clinical placements for students. Students, in some instances, can be viewed as a burden, detracting from service provision and quality of care delivery. Organisational funding structures also impact student placement provision, such as the private sector due to remuneration issues. Collaborative models, where more than one student is placed at a time, are said to increase student placement capacity.
Thomasz & Young (2016) Australia	Clinical educators and academic clinical placement coordinators	Multidisciplinary (speech pathology and occupational therapy)	Investigate the facilitating factors and barriers to student placement provision for clinical supervisors who work dual roles	Qualitative (Focus groups and semi-structured interviews)	Six key themes were reported, including experience of a non-traditional placement model, communication, clinical placement perception, view of supervision, students and placement assessment criteria.	Time constraints were identified as a potential barrier to placement provision, especially non-traditional placements. Good communication was reportedly required between all stakeholders, including universities. Students were perceived to offer value in reducing clinician's workload through the allocation of possible tasks, such as case management.

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Baldry Currens (2003) International	Literature review of placement model for clinical educators and students	Physiotherapy	Assess use and value of 2:1 clinical placement model for physiotherapy clinical educators and students	Literature review	Not enough evidence to favour this placement model. Reported advantages include increased time for supervision through patient delegation to students. Disadvantages were reported as the additional skills clinical educators required to facilitate the model and the increased paperwork and assessment required with multiple students.	2:1 placement model has the potential to increase placement provision, addressing some of the clinical placements required. Engagement of clinicians in the model is dependent on how it is presented. Traditional 1:1 placement model still reported to be favoured model and approach in included studies.
Baldry Currens & Bithell (2000) United Kingdom	Service managers, clinical educators, recently qualified physiotherapists and third-year physiotherapy students	Physiotherapy	Identify and address attitudes and organisational barriers to increasing clinical placements, seeking perspectives from key stakeholders	Qualitative (Interviews and focus groups)	Clinical education deemed to be a core role, but conditional. Clinical education viewed as secondary to professional practice role. Clinical education perceived to carry little prestige and requires greater support from staff and managers. Greater education and improvement in preparation would assist organisations to provide clinical placements. No standard method of calculating clinical placement capacity determined.	Both managers and clinical educators regard clinic education as a core role, however competing interests and tensions restrict implementation as clinical placements can be in opposition to the requirements of health services. Giving back to the profession was a major factor as to why clinical placements were viewed as a core professional role. Clinical placement provision requires greater organisational support. Clinical education was perceived to benefit staff recruitment as well as an education culture within an organisation. Stress and time constraints were reported to be associated with clinical placement provision.

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Blose et al. (2019) South Africa	Physiotherapy clinicians	Physiotherapy	Explore physiotherapists' perceptions of supervising undergraduate students	Qualitative (Semi-structured interviews)	Seven key themes emerged from the study. These included curriculum redress factors, organisational factors, stakeholder dynamics, barriers and enablers to decentralised clinical training, student preparedness for practice and recommendations.	Organisational factors related to poor infrastructure, a lack of resources and equipment and staff turnover resulted in clinicians managing high patient load demands and administrative duties in addition to clinical education provision. Poor student attitudes were also perceived as a barrier, inhibiting learning and placement provision. Curriculum and teaching pedagogy changes were often not communicated, contributing to a sense of supervisors being underprepared. Clinical education was considered a rewarding experience whilst aiding personal and professional growth, as it assisted clinicians to update clinical knowledge and skills. Students, in some instances, were perceived to assist clinicians to alleviate workload due to management of some patients.
Davies et al. (2011) Canada	Clinical educators	Physiotherapy (physical therapy)	Identify barriers and benefits to clinical placements of physical therapy students	Qualitative (Focus groups and interviews)	Benefits related to intrinsic factors such as personal satisfaction, development of reflective practice and updating currency of knowledge. Barriers were more extrinsic: time and space constraints, challenging students and decreased autonomy or flexibility associated with clinical supervision.	A major barrier to clinical placement provision was stress. Clinical placement provision also had potential to alter team dynamics and was, therefore, perceived as a barrier. Clinicians providing clinical placements did so out of a desire to contribute to the growth and development of the profession. Benefits were perceived to outweigh the barriers. An institutional culture supportive of clinical placement is vital to achieving this balance.

Author/s Location	Study Participants	Discipline/s of Focus	Aim/Purpose of Study	Methodology (Methods)	Primary Outcomes	Key Findings Related to Scoping Review
Fairbrother et al. (2016) Australia	Clinical educators and students	Physiotherapy	Evaluate the capacity development facilitator model to determine the enablers and barriers of the model, stressors experienced by stakeholders and ability of model to increase placement capacity	Mixed methods (Surveys and semi-structured interviews)	The capacity development facilitator model was determined to increase placement capacity and provide robust learning experiences with all stakeholders satisfied with the placement model (hospital, university staff and students)	Structured and funded placement models can increase placement capacity. The structure and model of placement can result in students being able to manage patient caseloads. Recognised that time, workload and stress can be barriers to clinical placement provision. Clinical placements need to be supported by both workplaces and universities with clear communication between all stakeholders. Students need to be adequately prepared and skilled for participation in clinical placements.
Foo et al. (2017) Australia	Clinical educators, students, placement providers, university and government	Physiotherapy	Determine economic costs associated with failure of health students on clinical placements	Quantitative (Cost analysis)	Student failure on clinical placements costs US$9,371 from the perspective of all stakeholders. Students assume almost 50% of these costs. Clinical placement providers and clinical educators also assume some costs, 19% and 1%, respectively.	Results were calculated based on failure of a 5-week physiotherapy clinical placement. Clinical placement providers assume costs associated with time spent on student-related activities and unpaid work and overtime associated with placement provision. Clinical educators assume some of the costs of failure given the unpaid overtime, which is calculated at approximately 15 minutes per day. Provision of placement by clinical educators was also reported to detract from tasks such as care provision and participation in professional development.

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Hall et al. (2015) Canada	Practising physical therapists	Physiotherapy (physical therapy)	Determine the factors contributing to physical therapists' decisions to supervise students and identify variables specific to Canada	Quantitative (Survey)	Six factors were determined to contribute to physical therapists' decisions to supervise students: stress, students' contributions to workplace efficiency, dislike of assessment tools, clinical educator preparation, student preparation/ attitudes and professional roles and responsibilities.	Stress was the highest indicated influential factor in the decision to supervise students, due to the perceived increased workload attributed to supervising students in addition to completing other job-related tasks. Clinician's levels of stress were reported to increase if students' performance was poor or if they were challenged by students. Students could contribute to workplace efficiencies if they were from more senior years. Efficiencies were perceived to reduce if students were from junior years. The assessment tool used to assess students was identified as an influential factor in the decision to host students due to the time required to complete it. Student preparation and attitudes can significantly impact clinicians' willingness to take students. Clinical educator preparation was also perceived as an influential factor requiring universities to provide clear guidelines and training. Clinicians' perceptions of professional roles and responsibilities can impact decisions to host students, with participation viewed as a strategy for keeping knowledge current, contributing to continuing professional development requirements and giving back to the profession.

Author/s Location	Study Participants	Discipline/s of Focus	Aim/Purpose of Study	Methodology (Methods)	Primary Outcomes	Key Findings Related to Scoping Review
Öhman et al. (2005) Sweden	Clinical educators	Physiotherapy	Determine perceptions of the professional role, education and professional status of physiotherapy clinical educators	Qualitative (Focus groups)	Clinicians perceived themselves as being in the middle of competing entities: being the healthcare organisation in which they work and academic institution. Positives of clinical placement provision were associated with contact with students and the currency of knowledge students brought with them. Competing factors such as time due to pressures from work resulted in stress and dissatisfaction with clinical placement provision.	Clinical placement provision was considered challenging yet stimulating. Clinical education was not regarded within a clinicians' work schedules, with no time allocation for the task. Participation occurred out of a sense of commitment to the profession.
Sevenhuysen & Haines (2011) Australia	Physiotherapy clinical educators	Physiotherapy	Explore clinical educators' perceptions of clinical education participation and exploration of the barriers of providing more placements	Qualitative (Cross sectional survey)	Three key themes emerged, including motivators (duty and responsibility), consequences (positive impacts to department profile and profession development) and beneficiaries of delivering clinical education	Negative impacts on workload and the effect this has on non-clinical tasks were perceived for placement participation. Deferral of tasks due to a lack of time reportedly decreased job satisfaction. Clinical education was viewed as a core role for the profession and clinicians were motivated to participate out of a sense of duty or responsibility. Students were able to assist with workload, with students being able to manage some of the caseload. A lack of space and resources was also perceived as a potential barrier to increasing clinical placement provision capacity.

Author/s Location	Study Participants	Discipline/s of Focus	Aim/Purpose of Study	Methodology (Methods)	Primary Outcomes	Key Findings Related to Scoping Review
Ard et al. (2008) United States of America	Association members and board representatives	Nursing	Determine components of clinical education and develop an understanding of the stakeholders involved in clinical education	Quantitative (Survey)	Participation from all stakeholders is required for clinical education to be a holistic experience. Intellectual, physical and passion components are required for clinical education. Key challenges identified required collaboration between education and practice.	Transient nature of scheduling of clinical placements means priority is not given to the task of clinical placement provision in everyday workloads. Active involvement from both students and clients or patients was deemed to be essential. Clinicians reported that they participated in clinical education because it enabled them to develop professionally, particularly in aspects of critical thinking.
Bwanga & Chanda (2019) International	Systematic review of nurse clinical supervisors	Nursing	Explore the experiences of nurses clinically supervising nursing students	Systematic review	Four themes emerged, including the role of clinical supervision and experiences of supervisors relating to managerial, educational and support functions of clinical supervision.	Supervision was determined to be demanding and complex, however resulted in benefits such as the opportunity to learn from students. A lack or shortage of resources required to facilitate clinical education were reported as potential barriers. Other barriers noted included staff shortages and an increased workload associated with placement provision. Foreign students with language and culture differences were also noted as a challenge. Poor relationships and communication with universities and academic staff were also reported as a challenge and barrier. Another barrier identified was if clinical supervisors were not supported by management or other staff.

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Author/s Location	Study Participants	Discipline/s of Focus	Aim/Purpose of Study	Methodology (Methods)	Primary Outcomes	Key Findings Related to Scoping Review
Jokelainen et al. (2011) International	Nurse mentors	Nursing	Determine how organisational capacity can build effective mentorship for clinical placement of pre-registration nursing students	Qualitative (Focus groups)	To build capacity, organisations need to have a positive culture for student clinical mentorship that is student centred and goal driven. Students need to be well prepared, and engagement from stakeholders is required.	Organisations are a significant factor in building clinical mentorship capacity, including support from management and administrators. Strategy is required as is supply of sufficient human and financial resources. Protected time for clinicians was reported as necessary to build capacity. Professional development opportunities and financial supports were also perceived as strategies that would increase and build placement provision capacity.
Levett-Jones et al. (2006) Australia	Clinicians, nurse managers and educators	Nursing	Improve the experience of nursing students through improved communication and partnerships with universities and health services	Mixed methods (Focus groups, interviews and surveys)	Five key themes were identified, including communication breakdown between universities and clinicians, mentorship, preparation for clinical placement, clinical competence and graduate readiness for clinical practice.	A frequently identified barrier was the communication breakdown that occurred between universities and clinicians. This results in clinicians being unsure of students' knowledge and skill level. Casualisation of the nursing workforce was also noted as a challenge, reducing numbers of clinicians willing and available to participate in clinical placement provision. Inadequate student preparation and a lack of clinical competence was also perceived as a barrier.

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Casares et al. (2003) United States of America	Clinical fieldwork educators and coordinators	Occupational therapy	Investigate changes to current practice and the future of the profession and how this influences clinical fieldwork education and coordination	Quantitative (Survey)	Productivity expectations, time required for documentation and number of hours worked all increased, impacting clinical placement provision, whilst job security, time for professional development and levels of care patients receive have reduced. Shortages in clinical placements are impacted by cost reductions, reimbursement changes and the productivity demands placed on clinicians.	The provision of clinical placements was perceived to negatively impact clinicians. Increased administrative workloads placed on clinicians was reported to influence ability to participate in placement provision due to time demands of providing a quality clinical placement experience.
De Witt et al. (2015) South Africa	Clinical educators, students and university staff	Occupational therapy	Examine factors that influence the quality of clinical educators from perspectives of stakeholders	Mixed methods (Focus groups and collection of participant demographics)	Clinical educators who are reluctant to participate in clinical education significantly impact the quality of the clinical placement experience.	Majority (54%) of the clinical educators in the study reported reluctance to engage in clinical education provision. Participation was out of expectation as a job role rather than desire to do so. A lack of agency around clinical placement provision was reported to significantly affect the quality of the placement experience and clinical educators' engagement with the process.
Ingwersen et al. (2017) Australia	Occupational therapy students and clinical supervisors	Occupational therapy	Survey and compare perceptions of clinical placements from students and clinical supervisors in an Australian regional health network	Mixed methods (Survey with open and closed questions)	Perceptions varied between students and clinical supervisors in four areas: preparation from the university, consistency across placement sites, supervisor feedback and burden of placement associated with workload for clinicians.	Clinical placement provision was perceived as a burden for clinical supervisors due to being viewed as an additional duty to their role and not core or central to it. Dissatisfaction was noted with the preparation offered by universities regarding information provided to clinical supervisors.

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Barton et al. (2005) Australia	Clinical supervisors	Social work	Evaluate the costs and benefits of social work clinical placements for both supervisors and organisations	Mixed methods (Interviews using a structured survey)	Benefits outweigh cost of placement provision. Benefits were reported as the tasks students could participate in whilst on placement, such as research projects and evaluation of programs. Supervisors benefit through professional development and recognition and development of reflective practice skills. Other benefits include viewing placements as a long-term job interview for students. Costs were recognised as time required for clinical placement provision and student use of resources.	Costs of placement provision were associated with time and use of resources. Work that could be carried out by students was viewed as a benefit as was links with universities. Students were also reported to contribute to reforming the agency practice and profile. Recruitment was reported as a major benefit and enabling factor for organisations participating in placement provision.
Waterhouse et al. (2011) United Kingdom	Practice educators	Social work	Explore the support and hinderances when practitioners train to be practice educators and what is required for them to remain in the role	Mixed methods (Surveys, group discussions, Delphi forecasting and interviews)	Four key themes resulted from the study, including supports available and valued by practice educators, supports required by practice educators, perceived barriers and the relationship that exists between practice educators' experience and confidence.	Universities providing support and training was valued by practice educators. Workload relief, remuneration for clinical education and educational support is required from senior management. A culture of learning within an organisation was also determined to be essential criteria. Barriers identified include workload pressures, lack of time, lack of financial incentives, lack of placement requirement understanding and differences in clinical placement requirements between universities.

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Author/s Location	Study Participants	Discipline/s of Focus	Aim/Purpose of Study	Methodology (Methods)	Primary Outcomes	Key Findings Related to Scoping Review
Zuchowski (2014) Australia	Task supervisors	Social work	Explore the experiences of task supervisors who supported social work students on clinical placement	Qualitative (Semi-structured interviews)	Three main themes were revealed, including task supervisors not being actively engaged in student supervision, relationships with offsite or external supervisors not always present and task supervisors not always involved in the assessment of students on placement.	Participation in clinical placement provision was viewed as a rewarding opportunity, and those who participated appreciated the opportunity. Rewards and benefits were reported to include personal and professional development and giving back to the profession through assisting to build the health workforce. Challenges were reported as the complexity and additional workload burden associated with placement provision. Benefits were perceived to be for both the clinician and the organisation.
Ferguson et al. (2014) Australia	Clinicians, students and hospital data	Dietetics	Evaluate the role and assess the impact of a clinical educator position on student supervision capacity	Mixed methods (Focus groups, semi-structured interviews and analysis of hospital data)	Implementation of a clinical educator position saw an increase in staff participation in clinical supervision from 42% to 98%. The implemented position was reported to increase ability of staff to manage students, with students being satisfied with their placements. Despite a 165% increase in clinical placement weeks, data revealed occasions of service and patient numbers remained unaffected.	The clinical educator position was a 0.5 FTE university-funded position. With the clinical educator position, communication was reported to improve as did support and knowledge and awareness of the clinical education process. More support was also available to less experienced members of staff in the process of clinical education. Challenges were still experienced by clinical supervisors, including inappropriate student behaviour and a lack of student initiative. Concerns of student performance in speciality areas of practice were also reported.

Author/s Location	Study Participants	Discipline/s of Focus	Aim/Purpose of Study	Methodology (Methods)	Primary Outcomes	Key Findings Related to Scoping Review
Gibson et al. (2015) Australia	Dietetic clinical educators	Dietetics	Explore hospital-based dietetic clinical educators' experiences of student performance and preparedness on clinical placements to inform curriculum	Qualitative (Focus groups)	Six key themes emerged from the research. These included the role of professional skills, students' clinical skills and knowledge, students' anxiety and confidence, the needs of students from different cultural and linguistic backgrounds, clinical educator training and its impacts and variability of expectations on students' preparedness for clinical placements.	Professional skills and student initiative were highly regarded by the clinical educators participating in placement provision. When students lacked these, clinical educators expressed concerns about students' overall ability. Students from culturally and linguistically diverse backgrounds also pose challenges to placement provision. Student placement provision was also reported to impact clinicians' time, with students reportedly underappreciating the diversity of a clinicians' workload in addition to clinical education. Variability in curricula and student preparation for clinical placements amongst institutions also creates confusion for clinicians participating in clinical education.
Hughes (2002) Australia	Managers and dieticians	Nutrition and dietetics	Assess attitudes of staff involved in dietetic student clinical placements following implementation of an initiative to increase provision and capacity	Quantitative (Cross-sectional survey)	Direct allocation of a placement honorarium was regarded as the highest-rated university initiative to increase supervisory capacity. This was followed by formal supervision training.	Despite specific initiatives being implemented to increase supervisory capacity, study participants reported student placement provision still increases overall stress and workload for staff. Study participants did, however, report that placement provision increases job satisfaction and encourages reflective practice and further learning and development.

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Author/s Location	Study Participants	Discipline/s of Focus	Aim/Purpose of Study	Methodology (Methods)	Primary Outcomes	Key Findings Related to Scoping Review
McAllister (2005) International	Editorial	Speech pathology	Address concerns and issues with clinical education of speech pathology students in western society	Editorial supported by literature	Clinical education has undergone innovation over the years. Stakeholders involved in placement provision are challenged to assess their own approaches to clinical education.	Challenges to clinical placement provision were noted as workplace constraints; staff employment arrangements, including a part-time workforce, and changes within the university sector all contributing to clinical placement shortages. Outdated approaches to clinical education were noted as a barrier, with traditional models of placement still the standard practice. Another barrier reported was the level of support offered to placement providers. Time was reported as a factor impacting clinical placements, due to increased workplace pressures. The nature of clients accessing a service was also perceived to enable or prohibit clinical placement provision. Clinician participation was driven by enjoyment of the role, the opportunity for personal and professional growth and recruitment of staff.
Morris (2001) United Kingdom	Speech and language therapy clinicians	Speech pathology (speech and language therapy)	Explore speech and language therapy clinicians' attitudes and perspectives of risk involved with delegation of clinical tasks to students	Qualitative (In-depth interviews)	Risks identified related to clients, the students themselves and the service. Risks were associated with psychological, behavioural, medical and structural factors.	Greatest risk of delegation of tasks to students was wellbeing concerns of the clients or patients. Client or patient risks were perceived to be psychological or medical due to students' inability to deliver safe care. Student task delegation needs to match a student's skill, knowledge and competence level. Risk to the service was also reported if task delegation and the management of the students on clinical placement does not occur in an appropriate manner.

Author/s Location	Study Participants	Discipline/s of Focus	Aim/Purpose of Study	Methodology (Methods)	Primary Outcomes	Key Findings Related to Scoping Review
Abey et al. (2015) United Kingdom	Podiatry clinical educators	Podiatry	Determine the factors that impact clinical educators' capacity to engage in a mentorship role	Quantitative (Survey)	Factors determined to impact clinical educators capacity to engage in mentorship roles were protected mentorship time, clinical educator relationships with universities, assessment and sign off responsibilities required with mentorship and volunteering for the role.	Protected time was viewed as an essential requirement in addition to podiatrists' clinical responsibilities. University links were also reported to increase willingness for clinicians to participate in placement provision as was volunteering for the role.
Byrskog et al. (2019) Bangladesh	Midwifery educators	Midwifery	Describe the perceptions and realities of midwifery educators in Bangladesh	Qualitative (Focus groups)	Numerous barriers were discovered, such as social barriers due to gender structures within the society. Other barriers included education, safety, profession development and economic barriers.	Addressing barriers is required to facilitate more students entering midwifery education. A lack of resources and space was reported to impact teaching and learning of students. Resources lacking include both supplies and equipment required for the clinical educational components of the professional qualification.

The studies included in the scoping review utilised a variety of research methodologies. Nineteen (39.6%) studies explored the perspective of study participants using a qualitative methodology. A mixed-methods approach, incorporating both qualitative and quantitative data collection, was employed in 14 (29.2%) studies. A quantitative research design informed nine (18.8%) studies; four studies (8.3%) did not detail a specific methodology (e.g., opinion/editorial pieces); and the remaining two studies were systematic reviews (4.2%). No scoping reviews were identified for inclusion.

Critical synthesis of the factors that influence provision of clinical placements for health students

Analysis of the studies in this review identified four major themes in relation to factors that influence the provision of clinical placements for health students from the perspectives of clinical placement providers: institutional, personal, university engagement and student capability.

Institutional factors

Institutional factors, such as organisational structure and culture, including the way in which placements are supported by both organisations and clinicians, significantly impact clinical placement provision (Baldry Currens & Bithell, 2000; Davies et al., 2011; Fairbrother et al., 2016; Jokelainen et al., 2011; Waterhouse et al., 2011). A number of benefits and positive motivational factors for both healthcare organisations and clinicians involved in clinical placements were highlighted, such as a positive impact on staff recruitment when health clinicians have the opportunity to work with students (Baldry Currens & Bithell, 2000; Barton et al., 2005; Hudson et al., 2012; McAllister, 2005; O'Brien et al., 2017; Rodger et al., 2008; Sevenhuysen & Haines, 2011). Additionally, the provision of clinical placements by a health organisation can contribute to job satisfaction, personal growth and professional development (Blose et al., 2019; Hughes, 2002; McAllister, 2005; O'Brien et al., 2017; Rodger et al., 2008). Healthcare organisations also benefit through student participation in activities such as research projects, service evaluations and quality improvement activities, which can positively impact the profile of health departments (Barton et al., 2005; Rodger et al., 2008; Sevenhuysen & Haines, 2011).

Whilst there are reported benefits, several institutional factors have been identified that can adversely influence clinical placement provision. How clinical placements are structured by healthcare organisations, and presented to staff, can impact clinician engagement. For instance, where studies reported that clinical placement provision was perceived to be compulsory and imposed on clinicians, the resultant lack of choice negatively impacted meaningful engagement and staff motivation (Abey et al., 2015; Baldry Currens & Bithell, 2000; Blitz et al., 2014; Crampton et al., 2013; De Witt et al., 2015; Sevenhuysen & Haines, 2011). Engagement in clinical education was also viewed

by some clinicians as secondary to their primary role of providing patient care (Baldry Currens & Bithell, 2000; Ingwersen et al., 2017).

Within healthcare organisations, multiple factors impact on an individual clinician's workload, for example: casualisation of the health workforce, high patient loads and administrative duties. These variables influence a clinician's capacity to participate in clinical education and the provision of clinical placements (Blose et al., 2019; Casares et al., 2003; Rodger et al., 2008; Waterhouse et al., 2011). Students have been reported to increase workload pressures—exacerbating stress for clinicians and further inhibiting participation in clinical education (Hall et al., 2015; Hughes, 2002; Ingwersen et al., 2017; Sevenhuysen & Haines, 2011; Shannon et al., 2006; Sturman et al., 2011). Managing a large caseload, in association with the increased time required for student supervision during client consultations, is an additional source of workload stress for clinicians and another barrier to engagement in clinical education (Blitz et al., 2014; Blose et al., 2019; Casares et al., 2003; Sturman et al., 2011; Widyandana et al., 2011). Conversely, there is also the potential for students to positively impact clinicians' workloads through assisting with the management of clinical caseloads (Blose et al., 2019; Hall et al., 2015; Sevenhuysen & Haines, 2011; Thomasz & Young, 2016). Other institutional factors that create potential barriers for clinical placements include the degree of client complexity as well as patients' willingness to consent to student participation in clinical consultations (Ard et al., 2008; Davies et al., 2011; Maloney et al., 2013; McAllister, 2005; Sturman et al., 2011; Widyandana et al., 2011). It was also identified that student participation in the management of complex patients may present a barrier to clinical placement provision if clinicians perceive a negative impact on the quality of care provided (Morris, 2001; Strohschein et al., 2002).

Physical considerations within health organisations also influence clinical placement provision. A lack of institutional resources, space and equipment represent a potential barrier to providing student placements if additional individuals, such as students, cannot be supported within the organisation (Bwanga & Chanda, 2019; Byrskog et al., 2019; Davies et al., 2011; Norman & Dogra, 2014; O'Brien et al., 2017; Scott & Sazegar, 2006; Sevenhuysen & Haines, 2011). When resources are stretched, students may be perceived as a potential additional drain on capacity (Barton et al., 2005; Davies et al., 2011; Maloney et al., 2013; McAllister, 2005). Student utilisation of resources has been linked to the financial implications of clinical placement provision. It was identified in some studies that clinical placements negatively impacted income through reduced client caseloads, which acted as a barrier to participation (Crampton et al., 2013; Hudson et al., 2012; Shannon et al., 2006). In addition to student use of resources, cost of involvement in placement provision is also a factor and consideration for both the institution and clinicians offering clinical placements (Foo et al., 2017). Organisations and clinicians were reported to bear some costs of clinical placement provision especially if students fail the placement (Foo et al., 2017). A lack of financial incentives to help offset the

financial impost of providing clinical placements was also considered a barrier, requiring rectification (Hudson et al., 2012; Jokelainen et al., 2011; Maloney et al., 2013; Norman & Dogra, 2014; Rodger et al., 2008; Shannon et al., 2006; Waterhouse et al., 2011).

Clinicians commonly reported time as a significant barrier to placement provision, having to accommodate clinical education and completion of clinical assessments into time allocated for regular clinical duties and administrative tasks (Baldry Currens & Bithell, 2000; Blitz et al., 2014; Fairbrother et al., 2016; Hall et al., 2015; Norman & Dogra, 2014; O'Brien et al., 2014; Shannon et al., 2006; Widyandana et al., 2011). Students can fail to appreciate the impact they have on clinicians' time and workload through a lack of recognition of clinicians' other competing work demands (Gibson et al., 2015), which can contribute to clinicians' feelings of stress (Hall et al., 2015). This lack of "protected" time within workloads creates an additional barrier to clinicians' engagement in clinical placements (Abey et al., 2015; Öhman et al., 2005).

Personal factors

Personal factors, intrinsic to the clinicians, also significantly influenced the provision of clinical placements for health students. Intrinsic motivation from enjoyment of clinical education and placement supervision emerged as a significant enabling factor (Crampton et al., 2013; Davies et al., 2011; Dybowski & Harendza, 2014; McAllister, 2005; Norman & Dogra, 2014; Scott & Sazegar, 2006; Shannon et al., 2006; Starr et al., 2003; Stone et al., 2002). Intrinsic motivation was linked to personal attributes, such as attitudes of altruism, willingness and enthusiasm for the role (Baldry Currens & Bithell, 2000; Crampton et al., 2013; Dahlstrom et al., 2005; Sevenhuysen & Haines, 2011).

Opportunities for personal and professional development through a two-way transfer of knowledge that occurs between clinicians and students can enhance the clinical education experience and enables clinicians to keep up to date with advances in knowledge and evidence-based practice (Blose et al., 2019; Bwanga & Chanda, 2019; Davies et al., 2011; Hall et al., 2015; O'Brien et al., 2017; Öhman et al., 2005; Rodger et al., 2008; Shannon et al., 2006). Other motivating aspects included maintaining professional registration requirements, giving back to the profession and contributing to the profession's future (Baldry Currens & Bithell, 2000; Blitz et al., 2014; Crampton et al., 2013; Davies et al., 2011; Gillies et al., 2005; Hall et al., 2015; Öhman et al., 2005; Sevenhuysen & Haines, 2011; Starr et al., 2003; Zuchowski, 2014). A clinician's desire to expose students to specialist areas of clinical practice, including rural clinical practice, is another personal motivation for clinical placement provision (Barton et al., 2005; Crampton et al., 2013; Gillies et al., 2005; Shannon et al., 2006).

University engagement factors

University engagement factors, including the way in which universities manage relationships with healthcare organisations and supports offered to clinicians who provide

clinical placements, are highly relevant determining factors (Abey et al., 2015; Ard et al., 2008; Henderson et al., 2018; Hughes, 2002; Waterhouse et al., 2011). Adequate communication, contact, training and support are identified frequently as enabling factors—not only in sustaining clinical placement provision but also of value in increasing placement capacity within healthcare organisations (Abey et al., 2015; Gillieatt et al., 2014; Hall et al., 2015; Hughes, 2002; O'Brien et al., 2014). Support and training from universities is considered a necessary requirement for healthcare organisations and clinicians to be familiar with the required clinical education process (Henderson et al., 2018; Jokelainen et al., 2011; Rodger et al., 2008; Waterhouse et al., 2011; Widyandana et al., 2011). Strong relationships with universities, developed through consistent and familiar contact, are considered to be influential in sustaining collaboration with healthcare organisations and clinicians (Abey et al., 2015; Gillies et al., 2005; Hughes, 2002).

In addition to supports offered by universities, other incentives, ranging from financial remuneration, formal recognition, academic titles and access to university systems such as library databases, are perceived to positively influence clinical placement provision (Crampton et al., 2013; Gillies et al., 2005; Hudson et al., 2012; Hughes, 2002; Jokelainen et al., 2011; Latessa et al., 2007; Sturman et al., 2011). Whilst some studies noted incentives as being important to sustaining ongoing involvement (Hudson et al., 2012; Jokelainen et al., 2011), other studies reported incentives as complementary, with enjoyment of the role perceived to be a higher motivational factor (Latessa et al., 2007; Scott & Sazegar, 2006).

Conversely, inadequate communication, contact and support from universities can be a significant barrier to clinical education and placement provision. A perceived lack of support and information provided by universities can cause frustration and may limit the willingness of healthcare organisations and clinicians to engage with the process (Abey et al., 2015; Bwanga & Chanda, 2019; Davies et al., 2011; Fairbrother et al., 2016; Ingwersen et al., 2017; Levett-Jones et al., 2006; Maloney et al., 2013; Thomasz & Young, 2016). Variability in curricula and how students are prepared for placement in relation to knowledge and skills creates confusion for clinicians participating in placement provision (Gibson et al., 2015). Information was also reported to be commonly missing from university communication relating to the curriculum, course structure and specific requirements of the placement, further compounding this confusion (Blose et al., 2019; Crampton et al., 2013; Dahlstrom et al., 2005; Levett-Jones et al., 2006; Norman & Dogra, 2014; Waterhouse et al., 2011). Inter-institutional variations in placement timing, placement duration and student preparation can ultimately impact placement provision if relationships between a university and placement providers are not managed adequately (Crampton et al., 2013; O'Brien et al., 2017; Waterhouse et al., 2011).

Student capability factors

The capability of health students, specifically student preparation and attitude towards clinical placements, significantly influences the willingness of healthcare organisations and clinicians to offer clinical placements (Bwanga & Chanda, 2019; Levett-Jones et al., 2006). Students' professional skills and initiative are highly valued by clinicians participating in clinical placement provision (Gibson et al., 2015). When students are capable and well prepared for clinical placements, positive outcomes can result for clinicians and healthcare organisations providing the clinical placement opportunities. Positive outcomes can include students assisting with the management of clinical caseloads (Blose et al., 2019; Fairbrother et al., 2016; Hall et al., 2015; Sevenhuysen & Haines, 2011; Thomasz & Young, 2016) as well as completion of other tasks, such as research and quality improvement activities (Barton et al., 2005; Rodger et al., 2008; Sevenhuysen & Haines, 2011).

Frequently, the literature reports the negative impacts of students who are poorly prepared or less capable and the implications this has for future clinical placement provision. Students with a negative attitude who are poorly prepared for placement are perceived to increase the time required for clinicians and healthcare organisations to deliver clinical placements (Blose et al., 2019; Fairbrother et al., 2016; Hall et al., 2015; Levett-Jones et al., 2006; O'Brien et al., 2014; Sturman et al., 2011). Student attitudes and behaviours are a particular concern for clinical placements in more speciality areas of clinical practice (Ferguson et al., 2014). Undisciplined and disrespectful student behaviours have a potential impact on clinicians' future engagement in clinical placement provision (Dybowski & Harendza, 2014). Language and cultural differences, primarily amongst international students completing clinical placements, are a potential barrier to clinician participation due to the challenges they pose to clinical educators (Bwanga & Chanda, 2019; Gibson et al., 2015).

Discussion

This scoping review uniquely draws together literature on the influences of clinical placement provision for health students over the past 20 years, highlighting the perspectives of stakeholders who provide the placements. Evaluation of the included studies revealed four key factors that influence the provision of clinical placements for health students: institutional, personal, university engagement and student capability factors. These key factors are important considerations that can assist with meeting the growing demand for clinical placements (see McBride et al., 2015).

When considering how health students' clinical education and placement opportunities can be sustained and expanded, it is important to explore the perspectives of all stakeholders, particularly those who influence the provision of clinical placements. In this scoping review, the perspective of health service managers was underrepresented; only three of the studies specifically included this stakeholder group (see Baldry Currens

& Bithell, 2000; Hughes, 2002; Levett-Jones et al., 2006). Health service managers' perspectives are important to consider, as they have significant influence over the timing and placement of health students within healthcare organisations; they also have the power to influence organisational change (Taylor et al., 2017). Clinicians who choose not to participate in clinical education or the provision of clinical placements are another underrepresented group in the literature; only one of the studies included in this scoping review specifically considered their perspectives as targeted research participants (see Scott & Sazegar, 2006). Failing to explore the perspectives of this group of clinicians has the potential to impact expansion opportunities for clinical placements, as they would be likely to have useful insights into potential barriers to placement provision. If these barriers are known, innovative strategies could be implemented to address them, however there is limited opportunity with currently available knowledge.

Several enabling strategies to assist universities to better support healthcare organisations and clinicians to offer clinical placements were identified in the literature. These include practical strategies for clinicians and supportive leadership opportunities for clinicians mentoring colleagues in clinical education (Baldry Currens & Bithell, 2000). The provision of clinical education programs and training opportunities for clinicians interested in engaging in clinical placement provision was suggested in multiple studies (Baldry Currens & Bithell, 2000; Gillieatt et al., 2014; Jokelainen et al., 2011). Financial incentives to acknowledge time commitments and productivity impacts associated with clinical placements were also proposed as a mechanism to address some of the barriers identified (Jokelainen et al., 2011; Maloney et al., 2013; O'Brien et al., 2017; Rodger et al., 2008; Shannon et al., 2006). Placement structure and support were also posed as ways to increase placement capacity, for example, clinical placements of longer rather than shorter duration. This has been proposed as a mechanism to increase engagement due to increased efficiencies in time committed to student orientation (O'Brien et al., 2017). The benefits of student clinical placement provision could also be promoted. Educating healthcare organisations and clinicians on the positives, such as the potential decrease in a clinician's workload through students assisting with the management of clinical caseloads, may be a useful strategy (Hall et al., 2015; Sevenhuysen & Haines, 2011; Thomasz & Young, 2016).

Collaborative approaches, such as the 2:1 supervision model, where more than one student is placed at a location, have long been suggested as a way to increase placement capacity (Baldry Currens, 2003; Strohschein et al., 2002). All of these strategies can be facilitated through improved communication with, and support offered by, university clinical placement academics (Rodger et al., 2008; Shannon et al., 2006). For healthcare organisations specifically, a suggested strategy is to ensure "protected" time for practitioner engagement in clinical education (Jokelainen et al., 2011). This was linked with the proposal that greater support for clinical education is required from health service managers and colleagues (Baldry Currens & Bithell, 2000). Addressing student

capability was another identified strategy to sustain and expand placement provision, requiring universities to adequately prepare students for clinical placement (Bwanga & Chanda, 2019; Levett-Jones et al., 2006). Strategies such as pre-placement days to orient students and self-care strategies for students have been proposed to assist students to prepare for the challenges of clinical placements (Gibson et al., 2015). It should be noted that no single strategy is suggested to offer a solution to the range of barriers identified; specific and individual circumstances should be considered in context and addressed as appropriate.

A potential limitation of this scoping review is the databases accessed to conduct the relevant searches. Whilst careful consultation and consideration was given to include the most relevant and broad databases, the authors acknowledge the existence of other databases that were not accessed as they were not deemed to be the most relevant or appropriate. Another limitation of this scoping review is the stakeholder perspectives that were included. Whilst the primary focus of this scoping review was the perspectives of student clinical placement provision from those who provide the placement opportunities, it must be acknowledged that this scoping review did not take into consideration all stakeholders' perspectives. Perspectives that are not included in this scoping review, as they were outside of the scope of this review, include those of patients or clients. This group of stakeholders are also critical to clinical placement provision and could warrant further exploration.

Conclusion

This scoping review provides a comprehensive account of factors influencing the provision of clinical placements for health students across 20 years. Uniquely, this scoping review considers the perspectives of those providing clinical education and clinical placement opportunities. These perspectives are critical to the development of strategies designed not only to sustain existing placement provision but also to expand clinical placement opportunities into the future. The ability to sustain and expand current clinical placement opportunities is essential to meet future clinical placement requirements for the increasing number of health students needed to meet global health workforce demands. Four key factors have been identified that influence clinical placement provision: institutional, personal, university engagement and student capability factors. All these factors include elements that may act as either barriers or enablers to the provision of clinical placements. What is evident from this scoping review is an obvious gap that exists in the current literature, notably the perspective of health service managers and also that of clinicians who choose not to participate in clinical placement provision. Further research is required to focus greater attention on the perspectives of these important stakeholders to better understand how clinical placements can be sustained and expanded for health students.

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