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# Learning on the periphery: a modified Delphi study of a nursing student communities of practice model

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## Abstract

**Objectives:** To develop a contemporary student placement model to address current placement challenges, impact student learning, and alleviate supervisor burden.

**Methods:** A modified Delphi technique was used to seek opinions, insights, and creative solutions.

**Results:** A draft Communities of Practice placement model, based on a systematic literature review, was introduced to a heterogenous expert panel (n=12). A contemporary placement model was developed and refined via video conference and email over three rounds.

**Conclusions:** Despite initial reluctance concerning a new model, participants became conversant with the concept of peer-to-peer learning, where incidental, albeit essential, learning and support occurs between students, which also supports supervising staff. Greater flexibility and student screening were also incorporated to enable greater learning, confidence building, and reflection. The model's success is contingent upon students working within their scope of practice and provides a contemporary approach to best responds to student, education provider, and health service needs.

**Keywords:** communities of practice; Delphi; nursing student; model; placement; student placement.

## Introduction

Currently, a growing number of students are enrolling into Bachelor of Nursing (pre-licensure BSN) programs in Australia and internationally (Carey, 2021; Dean, 2017; Perkins, 2021) and this growth is anticipated to increase even further over the next three to five years. This increase is a welcomed initiative to address projected workforce shortfalls (Haddad, Annamaraju, & Toney-Butler, 2020; Perkins, 2021; Spence, Zambas, Mannix, Jackson, & Neville, 2019). Although this increase assists to alleviate workforce gaps, having nurses skilled in speciality areas where the greatest need may exist, such as aged care, mental health, or intensive care, remains more challenging (Grealish, Bail, & Ranse, 2010; Hunt, Verstappen, Stewart, Kool, & Slark, 2020). Although meeting the clinical demand where the need is the greatest is vital, our focus here is concerned with educating the increasing numbers of undergraduate nursing students entering the various programs.

Within this context, the greater volume of undergraduate nursing students has led to placement delays among enrolled students. Further, the impact of the COVID-19 pandemic on clinical placement availability has created somewhat of a 'bottle-neck' in the progression of students. For example, in Australia nursing students enrolled in an accredited Bachelor of Nursing program must undertake 800 h (100 days) of mandatory clinical placement throughout the three-year program (McKenna et al., 2019; Schwartz, 2019; Taylor, Angel, Nyanga, &

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Dickson, 2017). However, there are a fixed number of health services that can provide a finite number of clinical placement experiences (Schwartz, 2019).

Overall, the various challenges regarding increasing student numbers and COVID-19 has led to and exacerbated placements delays while increasing costs to the university, when such delays have occurred. There are broader challenges also and have the potential to impact students graduating and commencing employment within the accredited three-year timeframe (Taylor et al., 2017). Lastly, healthcare services are also impacted when nurses experience fatigue caused by supervising a greater number of students, which impacts student learning (Terry, Nguyen, Peck, Smith, & Phan, 2020).

The purpose of this study is to create disruptive and innovative approaches to the current clinical placement models in place to address the increase in student demand, enhance student scholarship, and foster industry vitality, while generating financial efficiencies and delivering greater learning outcomes among students. Before a new or possible solution to clinical supervision is proposed an understanding is required of the current placement models commonly adopted.

## Overview of placement models within the literature

As has been highlighted, regulatory bodies within Australia do not prescribe how clinical placements are operationalised, only that they must occur (Birks, Bagley, Park, Burkot, & Mills, 2017; Kevin, Callaghan, Driver, Ellis, & Jacobs, 2010). As such, a review of the literature was conducted to understand and highlight the main clinical placement models that are currently being used to facilitate student learning leading to professional preparedness. Therefore within this context a variety of models have been developed and utilised to facilitate work integrated learning among nursing students (Birks et al., 2017; Kevin et al., 2010).

Nevertheless, the models identified within the literature focus on two principal models: Block and Distributed (Birks et al., 2017; Kevin et al., 2010; Rohatinsky et al., 2018). The block placement model occurs in a full-time capacity, in a clinical setting over a number of weeks, which may range from two to more than sixteen weeks, depending on a student's year level or education provider (Kevin et al., 2010; Rohatinsky et al., 2018). The block placement has its roots in the apprenticeship approach to nurse training practices that occurred prior to 1992 when the nurse training became part of higher education (Birks et al., 2017; McKenna et al., 2019).

Alternatively, the Distributed, 'non-block' or 'part-time' model requires clinical placements to occur between eight to sixteen hours a week, which may be spread over an entire semester. This model allows for integrated theory and practice to occur simultaneously with the aim to enhance learning (Birks et al., 2017; Coleman 2021; Kevin et al., 2010; Rohatinsky et al. 2018). The Distributed model was the outcome of a National Review of Nurse Education a decade after nursing education had transitioned to higher education to address identified gaps in meeting the needs of the healthcare industry that had emerged (Birks et al., 2017; Kevin et al., 2010). In some cases, clinical placements have also been observed to be a combination of both block and non-block throughout a program and even within the same semester. While a third placement approach, coined internship or clerkship model, can be found within the literature, it is not always an option for student placement in nursing, and instead tends to be used more extensively in the education of other health professionals, such as medicine or allied health (Coleman 2021).

Although not the focus of this research, an appreciation of these models provides a framework to understand the current study and to underpin the model that will be examined. As such, in addition to the Block and Distributed models, a critical review of placement and current supervision models in healthcare, including nursing was undertaken by Forber et al. (2016) and Terry, Nguyen, Perkins, and Peck (2020). The review identified there were a multiplicity of supervisory approaches as part of clinical placement, of which there were at least three major approaches identified with a number slight variations or modification to the major models (Forber et al., 2016; Spence et al., 2019). The three main groups encompassed what is termed the 'traditional' model, followed by the preceptor model, and the collaborative model (Taylor et al., 2017).

The traditional model is based on a clinical nurse or facilitator who is education industry funded to facilitate the instruction of a group of up to eight nursing students, who are partnered or buddied each day with

a different nurse on a particular ward. The variations of this model would see students either stay on the same ward or rotate to other wards (Courtney-Pratt, FitzGerald, Ford, Marsden, & Marlow, 2012; Forber et al., 2016; Spence et al., 2019).

The central element of the preceptor model or what is sometimes called a mentorship model, for post-graduate nursing students, is that the clinical facilitator is absent, and that a ward nurse works with and supports the same student for the duration of the placement (Borch, Athlin, Hov, & Sørensen Duppils, 2013; Forber et al., 2016; Franklin, 2013; Franklin, Leathwick, & Phillips, 2013; Spence et al., 2019).

Lastly, the collaborative model is where the education industry works in partnership with the educational unit of the healthcare facility, where the majority of student placements are provided. The collaborative partnership ensures students learning needs are met and requires strong partnership agreements and collaborative approaches to be in place (Forber et al., 2016; Russell, Hobson, & Watts, 2011).

Although only three major models were identified, it has been suggested that unique aspects to placement models evolve or may be purpose built for a variety of reasons, including the learning needs of students, supporting educators, industry requirements, or due to personal preference, however, there are limited indications on which model, if any, provides a more superior experience for students (Birks et al., 2017; Coleman, 2021; Faithfull-Byrne et al., 2017; van de Mortel et al., 2020). However, McKenna et al. (2019) suggests that despite these incidental, nuanced, and sometimes ad-hoc developments, in most cases, placement models have little changed over the past two decades. Further, McKenna et al. (2019), argue that the pedagogical soundness or educational robustness of the placement experience remains questionable, and there is a call for greater research regarding best practices to ensure student learning outcomes improve. Thus, there is a need for the research and development of more contemporary and sustainable models.

## The conceptual framework of a 'new' proposed placement model

Within the context of the three major placement modes, a further systematic review and metasynthesis focusing on supervision models used in clinical placements in nursing, identified a Communities of Practice framework. This framework had been somewhat articulated by Aston and Molassiotis (2003), focusing on peer support and has evolved into what is now termed peer teaching and learning in clinical placements (Secomb, 2008). While the ideas embodied by the peer learning framework is insightful, it has been identified elsewhere that the most effective learning occurs when individuals become and are members of a wider social group, where identity has the capacity to be developed and learning is fostered through the lived experience of practice (Walker et al., 2014).

Lave and Wenger's (1991) seminal research regarding how midwives, meat cutters, and tailors were able to learn new knowledge within their professions is a prime example. It is through these workplace or clinical exchanges, where the foundation of situational learning theory, a sociocultural process where perception and action occur before conceptualisation, was initially defined as a 'communities of practice' model (Li et al., 2009). Within this context, Buysse, Sparkman, and Wesley (2003), indicated that a number of elements distinguish situational learning, the principles of which underpin Communities of Practice from other learning types. These elements are that situational learning is established through daily activities that are indivisible from the complex environment where knowledge is applied, it is the result of a social processes that involves ongoing negotiation and problem solving with others, and that the acquisition of knowledge is achieved through experience and transferred to other similar situations (Terry et al., 2020).

Within the context of situational learning, a Communities of Practice is a diverse, fluid, and heterogeneous group that collaborate, build knowledge, develop skills, or problem solve. A Communities of Practice often remains abstract and ever changing, where members may fully participate at the core of the group, participate less regularly, or may be transient members, such as novices, who exist on the periphery (Walsh, 2017; Wenger, McDermott, & Snyder, 2002). Importantly, however, research suggests the peripheral members stand to gain the greatest knowledge and identity within the community (Terry et al., 2020). Within this context, a Communities of Practice placement approach provides students with a safe and supported space within which they

felt comfortable to experiment with their learning and begin to feel like genuine colleagues rather than students (Terry et al., 2020).

In healthcare settings, a Communities of Practice offers participants opportunities to form relationships, and share experiences, where learning clinical skills and professional culture can transpire (Aase, 2019). Current literature is replete with references to notions of Communities of Practice and is a conceptual model used to inform the socialisation of students and junior nurses into the nursing profession. However, there is limited research that explores the outcomes of their engagement within existing Communities of Practice (Aase, 2019; Terry et al., 2020; van de Mortel et al., 2020).

A recent systematic review conducted by Terry et al. (2020), revealed that student nurses reported that Communities of Practice were most often based on quality relationships, which provided a safe and supported space for learning. However, a new and essential finding, originating from the review, identified that peer-to-peer learning amongst these novices, who may be at differing years of training, organically occurred as a crucial, and often overlooked, element of the Communities of Practice. Peer-to-peer learning is defined as students who collaboratively work with other students to attain educational goals as an important means of enhancing the teaching-learning processes (Aase, 2019).

Previous research on the nursing student Communities of Practice, identified by Terry et al. (2020), indicated it is vital to create an environment where it is easy to engage in a dialogue with a senior member of the community which operates to mitigate errors in clinical practice. Moreover, students indicated it was the quality of relations with members of the community rather than the specific number of relationships for the Communities of Practice to be successful. It was also found that there was a need for strong connections among junior and senior novice peers in the group in order to navigate the group dynamics of a community as a whole, and this was a new, essential finding of the review (Astley-Cooper, 2012; Ransie & Grealish, 2007; Terry et al., 2020; Walsh, 2017).

The potential impact of incorporating a Communities of Practice into the most commonly used clinical placement model would move from a one-on-one apprenticeship style relationship between a student and a nurse (Aase, 2019; McKenna et al., 2019), to multiple students, supporting one another under the supervision of one or two nurses. Thus facilitating greater learning to occur between students and nurses, while potentially lowering the burden and cost of supervision (Secomb, 2008). However, how this model will look, function, and occur in the clinical space requires further exploration and insight.

## **Aim of the study**

The aim of this study is to develop a contemporary student placement model, based on communities of practice approach to support student learning and to alleviate supervisor burden. The research question was: what type of student placement model best responds to the needs of both student and health service?

Overall, the objective of the larger project is to investigate, refine, and test (i.e. use and adoption into practice) a student placement model that best addresses current placement challenges, while impacting student learning and supervisor teaching. For the purposes of this element of the larger study, our focus here is investigating and refining a framework of a new student placement model.

## **Design**

The exploratory study sought to undertake a modified Delphi technique to formulate and develop the framework of a proposed new student placement model. The proposed new placement model centred on communities of practice as highlighted within a literature review conducted by Terry et al. (2020), however, how this would be operationalised required key insights from those who would facilitate the model in practice. The Delphi is a well-established mechanism to achieve consensus for policy and guideline development in the

healthcare environment and is specifically used by clinicians to find solutions to an issue or create better processes in practice (Mozuni & Jonas, 2017; Taylor, 2020).

## Methods

### Modified Delphi technique

The methodology of the Delphi is quite fluid and remains flexible in its application, given the absence of a concrete theoretical framework. However, a modified Conducting and Reporting of Delphi studies (CREDES) was utilised to inform the study (Jünger, Payne, Brine, Radbruch, & Brearley, 2017) (Appendix S1). Habibi, Sarafrazi, and Izadyar (2014), further suggests that three key elements are essential to undertake a Delphi. These three elements include at least 8–12 members to participate and who are experts within a field; expert participants who come to the Delphi with a variety of backgrounds; and an expert group who are heterogeneous with differing specialties, insights, and understandings regarding the study subject.

In addition to these three elements, Linstone and Turoff (1975), has indicated the Delphi process is achieved through four distinct steps. Initially this process commences with an exploration of the subject being discussed where each member contributes information, they feel is vital. This is then followed by the second step where the group collectively proceeds to seek understanding of the issue and where disagreement, if evident, is embraced, celebrated, and further explored as part of the third step to provide insight and development of creative solutions or alternatives. The fourth and final step, which encompasses a gathering and analysis of the data to then be fed back to the group for further consideration. These four steps are then repeated over a number of times until a solution is agreed or artifact created.

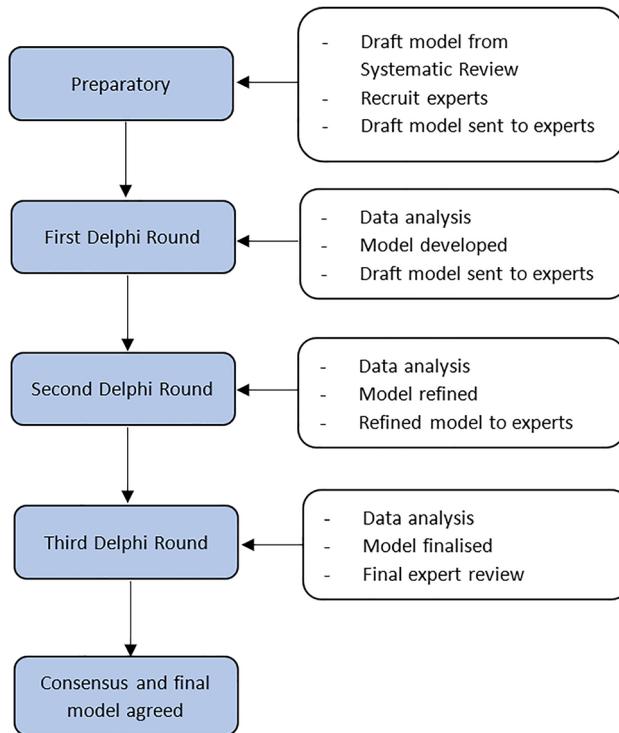
### Participants

A panel of experts were purposively selected and included  $n=12$  stakeholders. These included Clinical Educators ( $n=2$ ), Registered Nurses ( $n=2$ ), a student from each year level of a Bachelor of Nursing program ( $n=3$ ), academic administration staff ( $n=2$ ), academic staff members ( $n=2$ ) and a clinical coordinator ( $n=1$ ). It must be noted that clinical educators and Registered Nurses were all from one health service with multiple sites and who employs both Enrolled and Registered Nurses. The directly targeted group were invited to participate either by directly contacting the participants or through the education provider's workplace integrated learning or clinical coordinator, who was the principal conduit to engage with and invite key stakeholders.

### Procedure for model development and refinement

Within this study, open discussion, rather than survey type questioning was fundamental to identify and understand the nuances of placement, which included student and staff interactions. As such, the Delphi technique, which used tenants of Design Thinking (Mozuni & Jonas, 2017), facilitated the capture of key information regarding the placement experience. As such, the facilitator and other researchers undertaking the study, met collectively with all participants for three separate (30–60 min) focus groups. This enabled an in-depth discussion of the placement model, its development, and fine-tuning as it was prepared to be piloted in practice. Questions included but were not limited to 'Now that you have read and reviewed the model, what do you see as the benefits', 'What do you see as the challenges', 'What do you think is missing', and 'If this model did not exist, what would fill the void created by its absence'. As part of the process, each meeting session was recorded via video conference technology to facilitate ease of recall regarding key suggestions and points made by each participant. Also, at the commencement of each meeting, all participants were welcomed by the facilitator and reminded that all participants were welcomed to speak, as all had something to contribute as experts. Regardless of station or position, all participants were asked to respect what was being discussed at any time. If a participant was reserved or quiet, the facilitator would invite the person's perspective on any matter that was being discussed to ensure inclusivity and that all participants views were being heard.

Initially a draft model and description, based on a systematic literature review by Terry et al. (2020), was introduced to the group prior to the first meeting, and after each group discussion individual responses were summarised, analysed, and recommended changes made directly to the developing draft model. The revised model was then redistributed for the next meeting round. This exploratory process was repeated until consensus was achieved regarding how the model would look and function within the clinical setting. It was anticipated at least three rounds of discussions would need to have occurred (Mozuni & Jonas, 2017; Taylor, 2020), with the process being completed over a three-week period, as outlined in Figure 1.



**Figure 1:** Flow chart of Delphi technique to develop placement model.

### Ethical considerations

The study was granted ethical approval by the BLIND Ethics Committee (#BLIND) with all elements of human research being conducted in line with the National Statement on Ethical Conduct in Human Research 2007 (Updated 2018) (Commonwealth of Australia 2018).

## Results

Twelve experts participated in the Delphi study after an invitation was sent out to various identified parties. All experts participated in rounds one and two via video conference (Zoom) with only one participating in part of the first meeting due to technical difficulties. A third round was conducted with only four participants attending the meeting due to scheduling conflicts resulting from Covid-19 impacts and the need to provide essential care to patients, however, to accommodate this, a series of email exchanges occurred between the consultant and all participants that could not attend due to the essential work that needed to occur at the time. Rescheduling of the third meeting was not undertaken given the complex and unknown nature of the global pandemic at the time, in essence it was not an option as patient care was essential. It must be noted that the bulk of the tool's development was achieved by the second-round discussion, with the third round aimed at refining minor elements. The outcome of the Delphi is highlighted in detail and includes the outcomes of each of the three rounds of development leading to the final iteration of the model as outlined below.

### Placement tool development – Round 1

Prior to the first discussion, a draft model, based on the systematic literature review conducted by Terry et al. (2020), was sent to each group member seven days prior to the first meeting. Participants were invited to read and review the model and its description so as to discuss at the meeting. The outcome of the first meeting



highlighted the tension between current, well-established practices using the block placement model approach currently in place, why a change was being proposed, what that change might look like, and what impact of that change would have on already established roles and routines. Initially key experts, such as the Registered Nurses, needed reassurance that the new model in no way would replace them in their necessary role of the registered nurse, which was central to student learning.

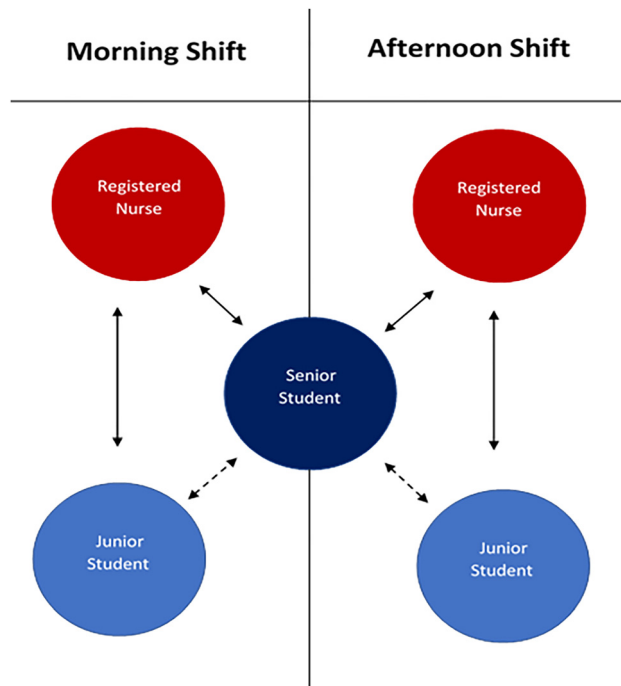
Despite this reassurance, there was a level of mistrust voiced among nursing staff regarding the new proposed model and the lack of clarity concerning how adequate learning could be achieved without direct supervision of nurses. The concern was that anyone who was not a nurse would lack the knowledge and understanding that comes from the clinical practice settings. One key statement which outlined clearly what some were saying was a nurse who stated, “they may not be the person you want handing out information ... we have had some senior nurses who I don’t think would be helpful to the junior students.” (Registered Nurse 1). However, this was juxtaposed by other key experts, including clinical educators, who suggested that learning is more than technical or clinical skills. It was indicated that a placement model that utilised a communities of practice approach would be ideal given senior students are fully cognizant of the experience as a junior student and would be able to support junior students in ways that supported the whole team. For example, one participant stated “The senior student will be able to direct the junior student if they see them looking lost. They can say ‘come on, we can go and do this together’ ... whereas the nursing staff might be to be busy doing their work to see that a student is looking lost” (Clinical Educator 1).

It was further suggested and agreed that the new model would allow for increased opportunities for other new avenues for communication that would be less formal and less intimidating among junior students. One student stated, “The learning between student to student is really good, as a senior student will have done what a junior student is about to do, so they will know what to expect, what they will need to do and how to help, that is really good” (Student 2). However, this was reliant on senior students being able to meet their own learning objectives. This was then discussed in terms of the need for and clear articulation to senior students on what the role and benefits would be, while also the need for vetted senior students to participate in the new placement model to ensure they can effectively support the junior students and the supervising clinical staff, while developing their own learning needs.

There was concern that senior student’s own learning and professional development needs would be ‘forgotten’ within the model and that it needed to be clearly articulated during the vetting process to ensure their preparedness for participation in the model. This was evident when one student stated, “I am really nervous about my senior placement, as this is my job interview, and I really would like to learn as much as possible on my placement ... if someone asked me to do this ... ‘would I do this, what is in it for me?’ I want to be more focused on my clinical side” (Student 2). As such, the experts wanted to ensure the senior students within the model would have the ability to develop their own skills, facilitate their own learning, while also developing their leadership skills in preparation for graduation.

After initial fears and concerns were addressed, the model itself and how it might function was discussed in detail. The initial model, developed from the literature, specified the supervising nurse, directing and supporting a senior student, who in turn then supports a number of junior students. However, this evolved to be a more robust model where a supervising nurse linked with one or more senior students to support their clinical learning. The senior students would then be linked, by the supervisor, with one or more junior students to support and provide experiential guidance throughout the shift. In addition, each of the junior students would be assigned to act as supports and mentors to each other throughout their block placement. This was highlighted when it was stated “there is some time here for first years to talk with each other ... they are comrades in arms and will talk together before talking with senior student or the registered nurse” (Clinical Educator 1).

In addition, the experts also began to question the status quo of the shift itself and the limitations associated with these arbitrary times in the day when staff changeover occurs. As such, it was suggested, and debated that a senior student could undertake their placement across or ‘floated’ between two shifts, starting mid-way through a morning shift and finishing mid-way through the afternoon shift. Through the discussion, several ideas were examined with one participant overviewing the groups discussion when they said “have the



**Figure 2:** Clinical placement model developed from round one of Delphi.

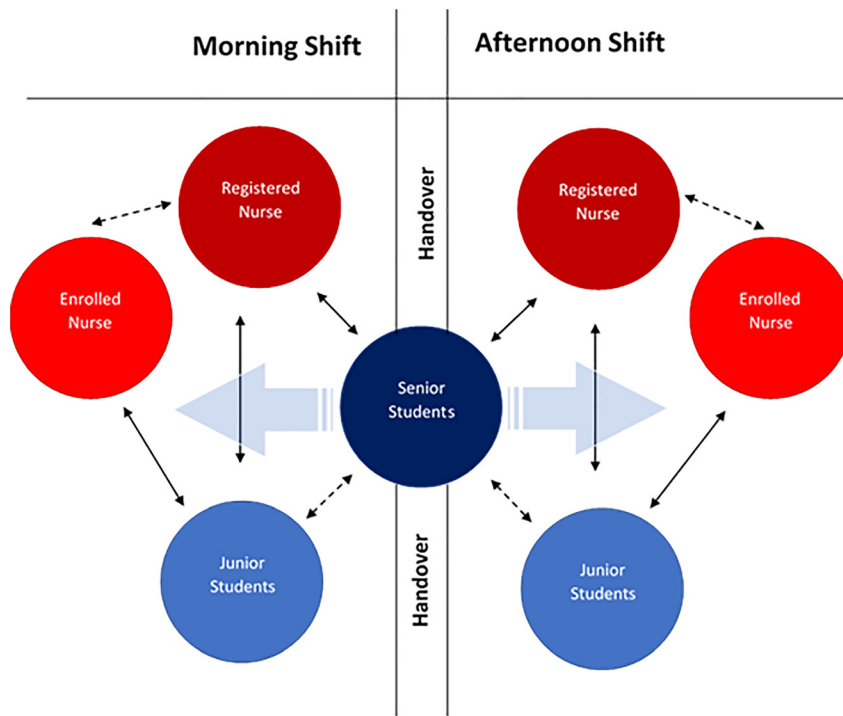
senior student on a floating [between morning and afternoon] shift ... They would come in contact with their [supervisor] nurse buddies and consult with the clinical staff on what support would need to be done with the junior student” (Registered Nurse 2). This would allow supervising staff to facilitate vital one-on-one clinical learning between the various junior students in each of the morning and afternoon shifts. Further, it was indicated that this will also allow greater incidental learning and mentoring to occur between junior and senior students at the other times of the respective shifts, under the guidance of the supervising staff member (Figure 2).

In addition to logistics, further insights were gained from the various experts, as such it was indicated that together, the senior and junior students, under the guidance of the supervising nurse, would undertake key tasks that would be within their scope of practice and that could be achieved by a senior student deemed competent to do so. Examples may include junior and senior students undertaking bed making, vital observations, hygiene, assistance with meals etc. However, if and when care falls outside of student scope of practice, both junior and senior students seek explicit guidance from the supervising staff member. As such throughout each shift the junior students will be always guided by supervising staff regarding appropriate care to patients that is within their scope of practice. When the senior student joins the team, they will also engage and negotiate with the supervising nurse for their own learning objectives, opportunities for practice, and clinical skill development.

## Placement tool development – Round 2

Prior to round two, discussion, suggestion and modifications were implemented into the model and the updated model resent to all experts two days prior to the next meeting. At the next meeting a number of additional concerns and challenges were highlighted, and each expert provided further insights into the model, how it will function and processes that need clarification, for specific clinical staff that are involved in the clinical placement of students. Within this context, the delineation of both Registered and Enrolled Nurses was suggested as needing further articulation. “There are multiple layers of staff within the health service that communicate and supervise students ... we need to add in the Enrolled Nurse, Registered Nurse, senior and





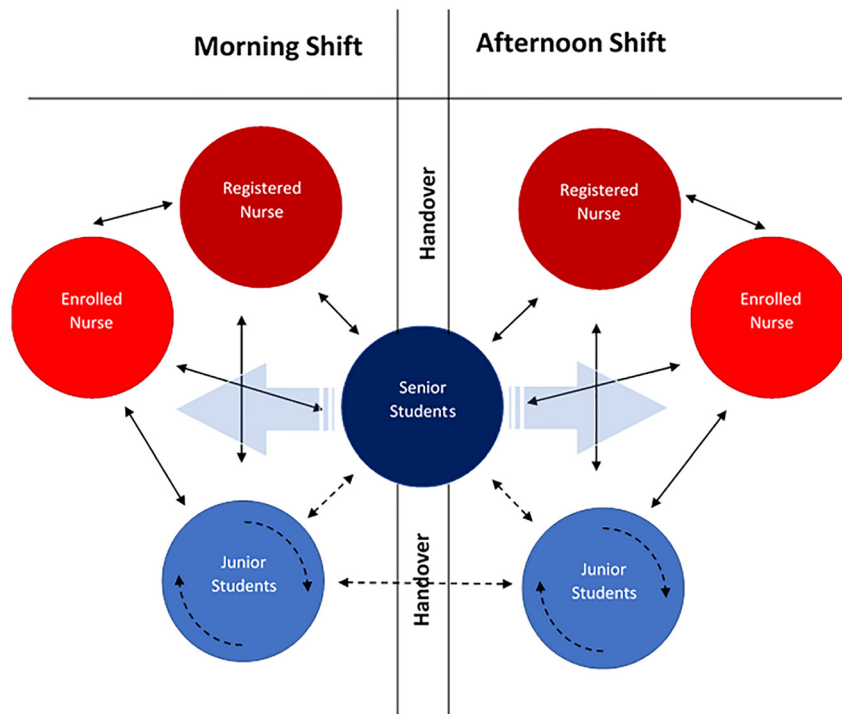
**Figure 3:** Clinical placement model developed from round two of Delphi.

junior students (Registered Nurse 2). Another participant added that adding the Enrolled Nurse into the model was important as “going to an Enrolled Nurse would not be as scary as going to a Registered nurse ...”. Further, given health services commonly utilises both Enrolled and Registered nurses to facilitate clinical placement experiences, it was suggested that this separation be made much clearer within the text and within the graphical representation of the model (Figure 3).

In addition, minor wording changes were also suggested to be included in the model, particularly where there was a lack of clarity regarding a process or where there was a certain level of ambiguity. For example, students and supervision “coming together in a huddle to discuss patients” (Clinical Educator 2) was argued that it needed to be more specific with the suggestion that the statement became “will come together in an informal 5–10-min huddle to discuss patients” (Clinical Educator 1). In addition, other clarifying elements were discussed in detail, specifically when senior students needed to attend handover and that clear justification needed to be included regarding the floating shift that the senior students would undertake. For example, it was felt that a caveat should be included to allow greater flexibility for the health service to meet needs of the senior student. As such, it was suggested that the floating shift be a flexible negotiation between the student and the staff, where the needs of the senior student would also be considered. For example, the student may be assigned a standard morning or afternoon shift at certain times throughout the placement tenure to ensure a well-rounded placement experience.

### Placement tool development – Round 3

As with the previous round, the suggested nuanced modifications were further implemented into the model and the updated model was again resent to all experts two days prior to the next meeting. Given the smaller number of participants, the meeting provided only a limited number of suggestions. However, additional information and modifications that were emailed from all parties who could not attend were also included and incorporated into the model. In most cases, further modifications were minor in nature and focussed on wording changes and clarifying statements where ambiguity was still evident. Additional, yet very minor,



**Figure 4:** Final placement model.

changes to the graphical representation of the model were also suggested and has led to the finally agreed model from all experts, as indicated in Figure 4.

The discussion also moved toward the key selection of senior students when organising placement utilising the new model. Although all senior students must undertake placement and all students must demonstrate the capacity to be a peer support of another student, it was suggested that some students have a greater capacity to achieve this than others. Therefore, it was indicated that when allocating students to placement as part of the new model, a clearer and considered vetting of students would be necessary. As such, senior students would need to demonstrate qualities of leadership, empathy, and who are supportive and respectful. These qualities were suggested to be identified through past placement performance, verbal clinical feedback from industry, and relevant placement documentation that examines nursing standards of practice. In addition, junior student would also need to be scrutinised to ensure they are respectful, civil, and willing to be guided by peers. Overall, the final model text and graphical representation, based on a block of time the students were on placement, had been sufficiently refined and prepared so that it could be shared with nursing staff and students prior to placement occurring (Appendix S2).

## Discussion

The outcome of this Delphi study is the development of a Communities of Practice model that is suitably refined to be tested (i.e., use and adoption into practice) within an undergraduate nursing program, as a framework for supporting learning within the clinical environment. While the use of the Communities of Practice model for nursing clinical experiences, in and of itself, is not a novel idea (Aase, 2019; Faithfull-Byrne et al., 2017; Grealish et al., 2010; Terry et al., 2020; Terry et al., 2020; van de Mortel et al., 2020), seeking to capitalise on the learning opportunities that exist between the more peripheral members of the model – junior and senior nursing students – does provide a new opportunity (Terry et al., 2020). The discussions and deliberations that transpired as part of the three rounds provide nuanced insights into the perspectives of those expert individuals and here, we examine those insights in the context of the broader literature.

While previous research suggests that there is no consensus in the literature about a preferred model for clinical learning for nursing students (Birks et al., 2017; Coleman, 2021), the more experienced nursing educators were supportive of the preceptorship model that was currently implemented at their particular health service. This resulted in an initial reluctance to change the supervision model being operationalised as part of this study. Importantly, this reluctance was not a reflection on the attitude of the clinicians. Rather, it was a recognition of their workload and feeling that they had little time to provide effective teaching (Atakro et al. 2019), let alone to change the model that informs their supervisory practice with students. Perhaps also underlying this initial reluctance was a fear on the part of the experienced nurses that peer-learning between the students might provide the conditions for key learning outcomes to be missed, a finding identified elsewhere (Nygren & Carlson, 2017).

This same apprehension has been identified in the peer-learning literature (Dyar, Stenfors, Lachmann, & Kiessling, 2020). Unfortunately, rather than viewing the peer-to-peer communication as an opportunity to add to the existing supervision, there is a tendency to think in terms of a deficit model and a subsequent loss of supervision (Nygren & Carlson, 2017). Research has shown however, that peer-learning provides positive outcomes for students learning from people who are in the same situation (Nygren & Carlson, 2017), and includes an opportunity for students to engage in the teacher role (Dyar, Lachmann, Stenfors, & Kiessling, 2019; Dyar et al., 2020). While the importance of expert supervision cannot be understated in peer-learning models, the role of the student in a peer-learning experience is not well addressed within the existing literature, with some studies suggesting that supervisors feel initially displaced (Dyar, Lachmann, Stenfors, & Kiessling, 2019; Dyar et al., 2020). In some cases supervisors can experience a role conflict given their own character is often tied up in their own identity as a teacher which has now changed, and has been shown elsewhere to be a barrier to the successful model application (Dyar et al., 2020; Stone et al., 2002).

The student experience and perspectives in the process of developing the Communities of Practice model varied based on their year level within the program. Consistent with existing research, more junior students tended towards a near-peer learning model as a means of overcoming their fear of the hospital environment and going some way towards addressing what they perceive to be the unwelcoming nature of the hospital environment (Stenberg & Carlson, 2015). Senior students who were more familiar with the hospital environment, were concerned about their own abilities as a teacher, a finding consistent with other studies (Nygren & Carlson, 2017; Stenberg & Carlson, 2015).

While the overwhelming majority of studies support an increase in learning through a near-peer model (Dyar et al., 2020; Nygren & Carlson, 2017; Stone, Cooper, & Cant, 2013; van de Mortel et al., 2020), students in the current study were consistently concerned about gaps in their knowledge and skills resulting from a peer rather than a supervisor providing guidance. The perceived tension between the psychological support offered by a peer and the experienced guidance that a more senior nursing preceptor can offer meant that students were conflicted about how the model might play out in application. This tension is consistent with the existing literature that holds, students in a peer learning model tended to feel that they were in constant competition for the attention and guidance of the preceptor (Dyar et al., 2020; Nygren & Carlson, 2017; Stenberg & Carlson, 2015; Stone et al., 2013).

All participants in the study identified a need for a pre-screening approach to identify those senior students who have well developed 'soft' skills of empathy, advocacy communication and an ability to instil confidence. Research has routinely identified these characteristics as essential elements of a successful clinical learning (Courtney-Pratt et al., 2012; Mahasneh, Shoqirat, Al Hadid, Alja'afreh, & Shosha, 2020). It was suggested that specific learning modules and activities could be developed within the undergraduate program to prepare the senior students for their role in the model into the future.

## Limitations

Although insightful and using several heterogeneous participants, the Delphi study was conducted with experts from one university and one health service. Therefore, the findings may not be representative of

Communities of Practices that may potentially be utilised in other healthcare settings or among education providers. While the work remains important, it may be considered rudimentary in terms of a wider implementation process and larger clinical acceptance. However, the approach undertaken was to capitalise on the learning opportunities that exist, and that are often overlooked or underutilised between the more peripheral members of a Community of Practice.

Despite these limitations, the initial draft shared with participants was formulated through systematic review of student placement and communities of practice literature. Further, embedded within the Communities of Practice placement model developed was the need for greater flexibility that would allow the nuances of a health service and student cohort to be met. Therefore, the study has created a more rigorous model with a nuanced understanding of the fundamental placement issues and how these may be addressed in within many practice settings. It is recognised that further modifications may be required after additional testing and validation of the model has occurred in various healthcare settings.

## Conclusions

In recognition of the documented challenges in healthcare such as nursing burnout, workforce shortages and deficits in undergraduate student nurse placements, a clinical placement strategy has been developed. Despite the initial reluctance concerning the new model, participants embraced the opportunity to become conversant with the concept of peer-to-peer learning where incidental, albeit essential, learning and support occurs between junior and senior students. It is this approach which assists students as they learn beliefs, behaviours, culture, and practices of nurses within the clinical setting. All participants agreed placement model success would be contingent upon each student's awareness of, and working within their current scope of practice, while undertaking considered vetting of students, and a commitment from senior students to seek guidance from supervising nursing staff when appropriate.

## Relevance to clinical practice

Overall, the study has developed the Communities of Practice placement model, which challenges the status quo concerning clinical placements among nursing students. The approach offers a contemporary student placement model that seeks to best respond to the needs of students, education providers, and health services. As such, the model has the potential to alleviate the current and future student placement demand experienced by universities. It also provides opportunities for greater learning and leadership development among students, while also creating value for nursing supervisors, and potential financial and clinical efficiencies for health services.

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