Student experiences of a paramedic clinical facilitator model during ambulance clinical placements: a qualitative study

Liam Langford¹

James Pearce²

Shane Lenson¹

1. School of Nursing, Midwifery and Paramedicine, Faculty of Health Sciences, Australian Catholic University, Watson, Australian Capital Territory, Australia
2. College of Medicine and Public Health, Flinders University, Bedford Park, South Australia, Australia

Corresponding author: liam.langford@acu.edu.au

Abstract:

Introduction:

Numerous challenges can impede the quality of ambulance service clinical placements for undergraduate paramedicine students. Inspired by positive results from a nursing facilitator model, this study reports on a collaboration between an Australian university and ambulance service that piloted a paramedic clinical facilitator for undergraduate paramedic students during their ambulance clinical placements. The objective of this study is to describe the experiences of a clinical facilitator model for undergraduate paramedicine students during ambulance clinical placements.

Methods:

Two focus groups with a total of 11 paramedic student participants were conducted, as well as two semi-structured interviews with a total of three paramedic preceptors. Purposive sampling was used to recruit participants. Thematic analysis was used to code and identify themes in the data.

Results:

Three broad, over-arching themes arise from the data; 1.) Increased educational opportunities, 2.) Improved clinical placement management, and 3.) Greater student support and welfare. Both students and paramedic preceptors felt that the paramedic clinical facilitator model improved the quality of ambulance clinical placements for undergraduate paramedicine students.

Conclusion:

This study suggests that a paramedic clinical facilitator model may improve the quality of ambulance service clinical placements for undergraduate paramedicine students, leading to a more positive learning experience. Universities and ambulance services could consider implementing a paramedic facilitator model for ambulance clinical placements.

Keywords: ambulance, clinical placement; paramedic clinical facilitator; paramedic education

Introduction

Ambulance clinical placement

Undergraduate paramedic education programs in Australia, New Zealand, the United Kingdom and many other jurisdictions include 'ambulance clinical placement', where students participate in an operational ambulance environment under the supervision of one or more qualified paramedics (1,2). Clinical placements are a type of work-integrated learning (3,4) and in paramedicine are sometimes called "on-road shifts". Situated learning such as clinical placement is key to quality pedagogy (5). Students have an opportunity to integrate theory and practice, develop required competencies such as professional skills, knowledge and attitudes, and begin professional socialisation (2,6). When clinical placements are undertaken in a supportive atmosphere with positive educational relationships, they are a valuable part of paramedic education (7), and are important in developing work-readiness of paramedic graduates (8).

Undergraduate paramedic students (referred to as 'students' herein) often experience poor quality ambulance clinical placements, leading to a negative learning experience. In one Australian study, over half of students felt they were treated with disdain by paramedic preceptors while on ambulance clinical placement, with other negative aspects including a display of sexist attitudes, being made to feel unwelcome, unproductive downtime, ineffective supervision, exclusion from patient management and inappropriate questioning of physical ability (9). Further to this, many students have reported experiencing verbal abuse, intimidation (10), and workplace incivility while on clinical placement (11). Students and preceptors also describe a mismatch of expectations around the ambulance clinical placement (12–17), leading to misunderstandings on both sides. Other barriers to a positive learning environment include frustration when paramedic preceptors are not aware of students' arrival or their learning requirements, lack of communication between the university and ambulance service, poor mentorship and education by paramedic preceptors, and inadequate support after critical events (15). These issues mean some ambulance clinical placements may not adhere to the *Higher Education Standards Framework* for work integrated learning set by the Tertiary Education Quality and Standards Agency (TEQSA) (18).

Clinical placement quality

A report commissioned by Health Workforce Australia (HWA), describes five factors that enable quality and improve the clinical placement experience (11). These are:

- 1. A culture for quality, comprising relationships, learning, and best-practice;*
- 2. Effective supervision founded on a good supervisory relationship;*
- 3. Learning opportunities and largely supported participation in direct patient care;*
- 4. Effective communication and collaboration between students, academic institutions, and placement sites to ensure adequate placement preparation; and*
- 5. Resources and facilities to conduct placement activities.*

Conversely, two barriers hinder the quality of clinical placements. These are:

- 1. Occupational stress which induces states of anxiety that inhibit learning, impair performance, and compromise health and wellbeing; and*
- 2. Workplace incivility and aggression which threatens the socio-emotional and physical safety of students in the placement environment.*

Currently, ambulance clinical placements may not always be aligned with the factors which enable quality clinical placements and strategies to improve this situation are warranted.

Facilitator and preceptor models of clinical placement supervision

Traditionally, paramedicine has adopted the 'preceptor' model of clinical facilitation, whereby a student is supervised by members of the paramedic crew. These preceptors are employed by the ambulance service and work directly with the student in the operational environment. Paramedics supervising students in this model are referred to as 'paramedic preceptors' herein, but elsewhere in the literature have been referred to as mentors, educators, training officers, clinical instructors or supervisors.

To bridge the institutional gap between the university and health service, and to improve the quality of clinical placements, various health care disciplines have used some form of supernumerary supervised practice. The nursing discipline has successfully utilised a ‘facilitator’ model. A ‘facilitator’ is a supernumerary supervisor who oversees a group (usually six to eight students) during clinical placement (19,20). The facilitator is responsible for evaluating a student’s educational requirements, discussing their progression and performance, briefing and debriefing, managing student welfare issues, providing clinical oversight and maintaining communication between the university and the health service staff (19). Similar models of successful facilitation, can also be found in other health disciplines such as midwifery (21), physiotherapy (22), and radiography (23). A summary of the differences between a preceptor and facilitator is found in Table 1.

Table 1. Comparison of paramedic preceptor and facilitator

Preceptor	Facilitator
• Part of ‘normal’ staffing levels	• Supernumerary position
• Employed by health service	• Employed by university
• Focus on day-to-day operations	• Focus on education
• Emphasis on policy, culture, guidelines	• Emphasis on critical reflection, complex concepts
• Supervises an individual student	• Supervises a small group of students
• Clinical expertise	• Pedagogical expertise

* Definitions adapted from Nash (19) and Health Workforce Australia (20)

A comparative study analysing a facilitator versus preceptor model during undergraduate nursing students’ clinical placement found value in both models. However, the facilitator model enhanced critical thinking, knowledge, reflection and technical skills when compared to a preceptor model of supervision (24). When surveyed, it was noted that undergraduate nursing students rated the level of support provided by a facilitator to be higher than that of a preceptor (25). Additionally, nursing students felt the facilitator model increased the opportunity to achieve clinical objectives, practice clinical skills and have one-on-one education time (26). Preceptor nurses noted that the facilitator’s role was instrumental in supporting them and allowed educational opportunities to students during times of high workload or

time constraints (25). To understand what constitutes a quality placement, both student and preceptors' views must be considered (27).

Research objective:

The objective of this study is to describe the experiences of a clinical facilitator model for undergraduate paramedicine students during ambulance clinical placements. It is hoped that by evaluating student experiences, barriers and enablers of quality regarding ambulance clinical placement for paramedicine students may be identified.

Methods

This manuscript was prepared following the Standards for Reporting Qualitative Research (SRQR) recommendations (28) to ensure quality and transparency of the study.

Approach and paradigm

As the purpose of this research is to understand the experience of the participants, a basic inductive qualitative research design was employed (29). The underlying philosophical approach is the interpretivist perspective, where an individual's reality is socially constructed as they engage with the world (30). The researchers aim to contribute to the understanding of a complex phenomenon, rather than explain an absolute truth. Focus groups and interviews were the instruments of data collection and source for analysis.

Researcher characteristics

The researchers accept the subjectivity inherent in qualitative studies and acknowledge our influence on the collection and interpretation of the data. All of the authors are from the discipline of paramedicine, and each has extensive experience in clinical practice and education. Our interest in this area stems from a desire to improve paramedic education. The lead researcher (XX) was the clinical facilitator in this study and was well known to both the students (as their university lecturer) and preceptors (as a paramedic

clinician colleague). He was actively involved in the phenomenon under investigation as a 'participant-observer', which allowed close insight into the students lived experience (31). Intimate observation, including the use of a reflexive logbook, gave the researchers a way to triangulate their findings.

Context

The context was an Australian Territory government-funded ambulance service, where students from a government-funded university were rostered for their ambulance clinical placement shifts. During their ambulance clinical placements, four to five students were placed at ambulance stations within a 20-minute driving radius. The students were usually placed within the ambulance shift rotation pattern: two ten-hour day shifts and two six-hour evening shifts. Students completed two rotations in total, a total of between 64 hours to 96 hours of clinical placement.

Ambulance service

Servicing a population of 396,857 (32), the ambulance service is responsible for the provision of emergency and non-emergency ambulance services. Operating from seven ambulance stations with 170 staff and 25 vehicles, the service had 51,894 responses during the year of the study period (2016-2017) (33).

University

Students were enrolled in a four-year dual Bachelor of Nursing/Bachelor of Paramedicine (BN/BP) degree at an Australian government-funded university (34). The majority of students had completed their second year of study, with 80 hours of prior ambulance clinical placement experience. A small number of students had completed the third year of the BN/BP with 160 hours prior ambulance clinical placement experience.

Facilitator

The facilitator was provided with a rental car, training equipment, a laptop and a mobile phone. Working on weekdays, the facilitator either operated from morning to afternoon or from the afternoon into the evening. Additionally, the facilitator was also on call twenty-four hours a day. As the deployment of ambulance services is dynamic, locating students by the facilitator was achieved by phoning the ambulance service's communications centre.

Sample selection

Student participants

Potential participants were identified by reviewing the clinical placement roster for the facilitator pilot period. There were a total of 74 potential student participants. Student participants were invited to attend by way of an email invitation and consent form directed to their student email accounts by the School's administration office.

Preceptor participants

After the pilot period, potential paramedic preceptor participants were informed of the study and invited to participate if they were the preceptor of a student during the pilot phase. The ambulance service, on behalf of the researchers, emailed the invitation and consent form to potential preceptor participants.

Sample size

Initially it was planned to conduct focus groups and interviews until data saturation was achieved (i.e no new themes emerging from the data). Unfortunately, it was not clear if data saturation was achieved due to the low response rate of participants.

Ethics approval

Ethical approval for the study was gained through the Australian Catholic University's Research Ethics Committee (approval number 2016-113E). As a requirement of the research process, site-specific

assessment approval was gained from the participating ambulance service. The study adhered to the permitted research protocol. At the completion of the interview, paramedic preceptor participants were given a movie voucher as a token of appreciation for supporting the study.

Data collection methods

Prior to the commencement of interviews and focus groups, written consent was obtained from each participant. Two student focus groups (with 11 students in total) and two paramedic preceptor semi-structured interviews (with 3 preceptors in total) were conducted. Originally it was intended paramedic preceptors would participate in their own focus groups also, as focus groups make for shared reflection, contributing to the richness of the data. Unfortunately, only three preceptors were willing to participate in data collection. Therefore, only semi-structured interviews were used for preceptor data collection. All interviews and focus groups were undertaken by a university academic who was not otherwise involved in this study, which helped to create a safe environment. Interviews and focus groups took place at the university campus, with students and preceptors attending different days to avoid power balance issues.

Data collection instruments and technologies

Focus groups and semi-structured interviews followed a standardised set of questions which allowed the interviewer to explore various aspects of the experience of the clinical facilitator model. All focus groups and interviews were audio-recorded and later transcribed verbatim using MS Word™ by an external company specialising in interview transcription. The question template can be accessed upon request by emailing the lead author.

Units of study

A total of 11 paramedic students agreed to participate in focus groups, with four students in one group and seven in the other. A total of three paramedic preceptors agreed to participate in interviews, with two preceptors in one interview and one in the other.

Data processing and analysis

All transcripts were anonymised during the transcription process, and each transcript was checked for accuracy by two members of the research team. Each participant was allocated a unique label, which was used to identify quotes from the participants.

Thematic analysis is a data analysis method which supports a rich, detailed description of data, and the six-phase process of thematic analysis outlined by Braun and Clark (35) was utilised in this study. Two researchers (LL and JP) familiarised themselves with the data by reading and re-reading the transcripts and noting and comparing initial thoughts. Next, the researchers independently undertook initial coding of data, which involved systematically reviewing the transcripts, identifying and deriving the most basic elements of the data using a combination of traditional paper-based methods and MS Word™. Next we arranged our initial codes into potential themes, reviewed our potential themes against our codes, then refined, clarified and named our themes. Finally, we produced this report, which includes vivid, compelling extracts from the data. Overall, an inductive, data-driven approach was used for this study, with data coded and arranged into themes in a collaborative and iterative process. The researchers reviewed the data analysis until consensus was reached.

Techniques to enhance trustworthiness

To increase trustworthiness and credibility of the study, the researchers conducted member checking by presenting preliminary findings at an international paramedic conference where experts in qualitative research were able to give feedback. This resulted in further refinement of several themes. Additionally, the researchers were also able to triangulate data by reviewing the facilitators reflexive logbook and ensuring congruency with the student and preceptor interviews and focus groups.

Findings:

Thematic analysis of the data revealed three broad, over-arching themes. The three themes identified were 1.) Increased educational opportunities, 2.) Improved clinical placement management, and 3.)

Greater student support and welfare (Figure. 1.). Quotes below are coded with a unique label in order to identify their origin. For example, 'PSFG1, P2' corresponds with 'Paramedic Student Focus Group 1, Participant 2' and 'PPI1, P1' corresponds with 'Paramedic Preceptor Interview 1, Participant 1'.

Figure 1. – Themes present in clinical facilitator model

Increased educational opportunities

Both student and preceptor participants reported that due to the preparatory work of the paramedic facilitator before the students attended their clinical placements, preceptors better understood the students' curriculum and learning outcomes for their clinical placements. The facilitator emailed preceptors approximately a week before the student's arrival to introduce the student and explain what stage they were in their course progression.

"You had a point of reference as opposed to having to trudge through the same questions all the time with every student you get, and then not knowing exactly what they do or don't know, and whether or not you're pitching things too advanced or too low for them." – PPI1, P1

"It's really good, he sent through an email to let them [paramedic preceptors] know that we [students] were coming." – PSFG2, P3

Where possible, the paramedic facilitator introduced the student to the crew at the ambulance station at the commencement of their first placement. The facilitator re-enforced the capabilities of the students. Students felt increased confidence with this positive start.

"I was at a station and he [facilitator] was there. He explained "She's just done this unit and this unit so she'll be good to do this, this and this", and listed off skills we knew. They [paramedic preceptors] were like "Oh, OK!" – PSFG2, P6

"(The facilitator had) a very good idea of all of us and where we were at so that was an exceptional help." – PSFG1, P1

Participants reported feeling an increase in overall confidence due to the role of the facilitator. This confidence boost lead to students participating more actively in supervised patient management, and in preceptor's confidence in allowing the students to demonstrate their skills and knowledge.

"Because our facilitator knew the [paramedic preceptor] staff and he knew us, it got us in with them, so they felt more confident. Because he was confident with us, then they were confident with us, so it actually allowed us to do more on the road." – PSFG1, P2

"It was nice to have someone who already has a little bit of confidence in you and says, "This person can do this." It's a bit reassuring." – PSFG2, P5

The facilitator encouraged a positive learning environment, providing an example for preceptors. This modelling lead to a culture of teaching and learning, where preceptors were more willing to engage with students educationally.

"The facilitator provides the paramedic [preceptor] with an example to follow." – PSFG1, P2

"I think mine literally said to me "Oh XX sent me an email, I guess we better do this," so ordinarily they probably wouldn't have volunteered but, "Oh yeah, okay, let's go do it!"." – PSFG2, P4

"He actually jumped on with one of our call-outs and on the way there he was like, "Okay so this is the scenario. What would you do?"." – PSFG1, P2

A major issue identified by both student and preceptor participants were that the ambulance clinical placement was undertaken in a live emergency ambulance environment where, understandably, operational issues were the priority rather than student education. Students perceived that the preceptors were often reluctant to provide educational opportunities to students due to this competing priority. The paramedic facilitator helped to address this imbalance by being a dedicated educational resource. Student's learning opportunities were increased and productive time was maximised while on placement.

"It's good to have a facilitator that understands not only what you're going through but also what the crew needs and what you both need to work together." – PSFG1, P4

"Your time often on station without jobs you would be doing something helpful like scenario practice or learning something rather than just sitting around." –PSFG1, P3

Students especially appreciated the opportunity to debrief and critically reflect after cases. Regular debriefing allowed an opportunity to strengthen the learning from each case.

"You are still in a work environment, and there is no time to stop and talk about it, but with the facilitator you can do that." – PSFG1, P4

"You're trying to put everything into context having someone who knew what you'd covered in class and then was able to apply that with a patient and bring it all together, that was really good." – PSFG2, P5

"We actually got feedback throughout the shift." – PSFG1, P4

"It gives you an opportunity to debrief rather than having to go to the next job." – PSFG1, P3

Paramedic preceptors appreciated the enhanced, more personal clinical placement experience. They valued their contribution to the students learning.

"It's really isolating just having a student turn up, look after them for a few shifts, and then they disappear. It doesn't let you feel like you're involved in any way other than almost like in a caretaker...It's almost like an observer, it's not really like having a student placement. Facilitators make that become more like a student placement and less like a disjointed experience for us." – PPI2, P1

Overall, students felt supported in an enhanced educational relationship with the paramedic facilitator. The increased support reduced workplace stress, allowing students to perform at their best.

"You don't feel bad about saying, "Can you help me?" or, "This happened". The facilitator's job is for students. They come in and you're like okay cool, I've got this, and you don't feel bad. It's such a breath of fresh air when he walks in." – PSFG2, P4

Improved clinical placement management

Students and preceptors found it advantageous having a designated point of contact between the university and ambulance service to manage the issues which inevitably occurred with the day-to-day

management of student clinical placements. Increased communication allowed for improved coordination and resolution of issues. Students especially noted clear positives with having a dedicated contact to manage logistical issues.

“My second shift got cancelled and then someone else couldn’t make it (to their shift) so I jumped on her shift instead.” – PSFG1, P2

*“He...drove one of them across town to get into another car and did all that management stuff.”
– PPI1, P1*

The facilitator, having prior knowledge of both the students’ and preceptors’ backgrounds and personalities, instigated pre-emptive strategies to improve team coherence prior to any issues becoming apparent, such as re-allocating students to more willing preceptors.

“The facilitator would move, or recommend you move, into a different station just because he knew the crew that were going to be working would be better suited to a student.” – PSFG1, P3

On several occasions students had negative experiences with allocated preceptors. The facilitator was able to manage these conflict situations and implement an appropriate strategy, such as counselling the student or preceptor or re-allocating the student to more receptive preceptors at an alternative station.

“I think sometimes you’re not always comfortable with the crew so it’s nice to know that you can talk to somebody or ask questions that you might have a better relationship with.” – PSFG2, P1

*“It gives them a bit of confidence having someone to go to if they’re not gelling with the team.” –
PPI1, P2*

Greater student support and welfare

As expected in an emergency ambulance environment, while on clinical placement, several incidents which had the potential to impact student welfare significantly. These included confronting and traumatic cases, preceptor hostility towards students, and stress and anxiety about workplace issues. The facilitator had a previously established trusting relationship with both students and preceptors. Furthermore they were seen as trustworthy and approachable regarding sensitive matters. Preceptors utilised the facilitator as a referral and intervention point for student welfare post incidents, including debriefing, and access to further services.

“My crew actually contacted the facilitator about an experience that I did have that was overall a very difficult one. So the fact that he actually – he called me the next day to make sure I was okay and walked through what happened.” –PSFG1, P2

“That was very good to be able to do student welfare thing within a timely manner. Particularly with somebody that the student already knows and trusts. So that’s extremely important.” – PPI2, P1

Students reported that having access to the facilitator to support them after critical events resulted in potentially adverse events turned into learning experiences.

“That definitely wasn’t a negative learning experience anymore where it possibly could have been had I not had that support from the clinical facilitator.” – PSFG1, P1

Overall, students felt they were better supported at all times by the paramedic facilitator, due to the increase in socio-emotional and physical safety. This level of continuity and support resulted in increased student confidence.

“Having a dedicated clinical facilitator meant that support was there all the time.” – PSFG1, P1

"Someone that we are able to contact that we know will answer the phone for us." – PSFG1, P2

Discussion:

This study sought to describe the experiences of a clinical facilitator model for undergraduate paramedicine students during their ambulance clinical placements. We found that a paramedic clinical facilitator model improves the quality of ambulance service clinical placements for both undergraduate paramedicine students and their preceptors, leading to a more positive learning experience. Many of the recognised contributing factors to quality clinical placement are fulfilled when the facilitator model was used, and the recognised barriers were reduced.

Our research echoes previous literature which asserts that students have a positive clinical placement when workplace supervisors support them educationally, are informed about their studies and their strengths and limitations, and who are tolerant and supportive of learners (35). The facilitator model provides continuity, which is important for students to gain the most from their placement (37,38). This study found that the role of the paramedic facilitator is similar to that of a paramedic assigned to work with newly practicing paramedics, including the roles of coach, role model, socialiser, and protector (39).

From an educational theory perspective, the researchers suggest that the facilitator model is likely to aid students to better achieve learning outcomes required by the university from the clinical placement (as both a teaching/learning activity and assessment task) (40), thus improving constructive alignment. Further, as the facilitator was aware of the level of the student's development and passed this on to the preceptors, students were more likely to be better 'scaffolded' in the zone of proximal development (ZPD) (41) including being permitted to perform skills with assistance from a 'more knowledgeable other' (MKO) (either their preceptor or the facilitator) (42). Participants also noted the facilitator provided the opportunity to debrief cases and critically reflect. As reflection is an integral component of experiential

learning (43), students were able to utilise concrete experiences while on placement and were assisted in concept creation by the facilitator.

Additionally, as the facilitator provided a thorough introduction to students and their preceptors, they were potentially accelerated through the 'forming' and 'storming' stages of small group development, into the 'norming' and 'performing' stages (44), where optimal learning occurs. The facilitator's modelling of a positive learning and teaching culture was also imitated by preceptors, representing a form of social learning (45). However, it could be speculated that the facilitator's prior rapport with students and preceptors contributed to the positive social-cultural aspects highlighted. It is not known whether the same results could be replicated if there was no prior relationship between all parties.

As this study actively involved the lead researcher as a 'participant-observer' (31), steps were ensured to limit bias. These include recruitment and interviews being conducted by parties external to the research group, as well independent coding, the use of a reflexive logbook and a declaration of the potential bias of the study. Formal bracketing was not undertaken during this study but should be considered in similar studies (46).

Previously, researchers in the area have called for a more collaborative approach to clinical placements (47). To encourage quality clinical placement, we encourage universities and ambulance services to consider collaborating, implementing and evaluating a sustainable paramedic facilitator model for students while on ambulance clinical placements. Further research is required in the area of clinical placement (6,48), with important work underway in the area of paramedic education in general (49).

Limitations:

This study has several limitations. The study took place within a single, comparatively small (by geographic area and population) ambulance service, with a small group of students from a single

university, over a short time period. In larger ambulance services, with greater student numbers, the experiences and perceptions of the students and preceptors may be quite different to this study.

Further to this, the setting of the study was based in a metropolitan/suburban geographical location.

There may be logistical challenges in implementing a face-to-face facilitator model in a regional and rural environment due to increased distances and travel times. However, there is the potential to investigate the use of other facilitator delivery models, including teleconference or web-based learning environments.

Having only three paramedic preceptor participants provides some insight, but it may not be an accurate representation of the true paramedic preceptor's experience of the facilitator model. Also, students who are eager to participate in research activities may not be representative of the whole student population. Additionally, as it was a participator-observer model of inquiry, there may be students who had a negative experience who were not willing to participate in focus groups.

As the facilitator either worked during the day or late afternoon/evening throughout weekdays, it meant that some students had limited face-to-face contact with the facilitator experience while on weekend placements. Again, this would influence the experience and perceptions of the facilitator model.

Conclusion

Previous research has shown that currently, there are multiple barriers to robust, high-quality learning experience for students while on ambulance service clinical placements. This study suggests that a paramedic clinical facilitator model moderates current challenges by increasing learning opportunities, improving placement management and providing greater support and welfare to students. Overall the paramedic clinical facilitator model appears to improve the quality of ambulance service clinical placements for undergraduate paramedicine students, potentially leading to a more positive learning

experience. Universities and ambulance services could consider collaborating, implementing and further evaluating a paramedic facilitator model for ambulance clinical placements.

Conflicts of interest

The authors declare that there are no conflicts of interest.

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