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Factors affecting the education of pre-employment paramedic students during the clinical practicum

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Abstract

Aim

To identify factors that affect the education of pre-employment paramedic students during the clinical practicum.

Method

A purposive sampling technique was employed to recruit undergraduate students from the Bachelor of Emergency Health (Paramedic) (BEHP) who had recently completed their first or final clinical placement.

Qualitative data was collected via a total of 3 focus group discussions; two focus group discussions were conducted with students on completion of their final placement, and one focus group discussion was conducted with students who had recently completed their first placement. Participants were asked to share their career and placement expectations, placement experiences, career path intentions, and the impact of placements on their career decisions.

Results

This paper reports on student perception of education in the clinical environment and their impression of the strengths and weaknesses of this model. We identified four major themes: (1) communication, (2) appropriate placements, (3) capacity building and, (4) adequate preparation for students.

Conclusion

The University, ambulance service and students need to form a relationship to foster the quality of clinical education. Each party needs to adequately communicate and prepare for quality learning to occur in placements. Good mechanisms for the identification of problems early, particularly in relation to student support and case load are necessary. Ongoing evaluation of the quality of clinical placement education is required and should include all parties who are also committed to continuous improvement.

Keywords: *clinical competence; education; emergency medical services; paramedic education; preceptorship; program evaluation.*

Introduction

Paramedic education programs throughout Australia share some features that are common to other allied health education programs.[1] One of these is the clinical practicum, which seeks to integrate theory and practice, enables the development and assessment of professional competencies, and provides opportunities for the student to develop skills through practice and to refine these skills based on performance feedback provided by their clinical supervisors.

Australian ambulance services introduced formal training for their operational staff in the 1960s as the role of the ambulance officer began to develop beyond that of first aid and transport of the sick and injured. These training programs were commonly delivered "in-house" by the employer, and typically involved blocks of theoretical instruction interspersed with supervised "on-the-job" training.[2,3]

While this industry based vocational education continues to operate in some jurisdictions, ambulance services in Australia and the United Kingdom are beginning to rely on undergraduate paramedic education programs to meet their employment needs.[4] The Bachelor of Emergency Health (Paramedic) (BEHP) course offered by Monash University is one such course. Student learning is supported by a case-based approach to teaching, which enables the integration of the five themes which underpin the curriculum. These are: personal and professional development, population health and society, foundations of the paramedic clinician, community-based emergency health, and science, knowledge and evidence. Simulation and clinical placements with rural and metropolitan ambulance services and with hospitals[5] are an integral component of the student learning experience. The clinical practicum is an important component of this development. Although simulation provides opportunities for the development of clinical decision making skills and the practice of psychomotor skills, students must also learn to apply these skills in the workplace where they may encounter more realistic and challenging clinical situations. In addition, the national ambulance competencies that underpin the learning in this course mandate the assessment of learning in the workplace.[6]

Through self reflection and critical evaluation students are expected to develop and exhibit professional behaviours to ensure that graduates are adequately prepared for current and future roles in community based emergency health care.[5]

Anecdotal criticism of university-based paramedic programs include the reduced clinical practicum compared with the traditional industry-based training. Experiential learning in an appropriately supervised clinical setting is an important element of paramedic education. However, graduates of the BEHP do not have access to the same amount of clinical time as their industry-based predecessors, and as such it is important that the best use be made of the available clinical placement time within this course. This paper describes the inaugural student experience of the clinical practicum within the BEHP course which is currently unreported in the literature.

Methods

A thematic approach was used in order to explore this topic in-depth. Purposive sampling was used to recruit undergraduate students from the BEHP. Students who had recently completed their first or final placement were invited to participate.

Data was collected using focus group discussions. Open-ended questions were designed to elicit the attitudes and understandings from participants (see questions in Table 1).

Table 1: Focus group discussion/interview schedule

▪ What were your career pathway expectations at the beginning of your degree?
▪ What were your expectations about clinical placements at the beginning of your degree?
▪ What was your experience of clinical placements?
▪ What is your current thinking about your career pathway and location of practice?
▪ Why or how have these changed from your thoughts at the beginning of your degree?
▪ What was the impact of clinical placements in your decisions?

Each discussion lasted between 60-90 minutes. The conversations were transcribed verbatim and de-identified transcripts were sent to participants for feedback. No participants requested amendments.

All transcripts were managed within QSR NVivo (Version 2.0.161). The qualitative data was analysed, guided by Strauss and Corbin's grounded theory.[7] The data was closely examined, compared for similarities and differences then categorised according to themes. Each theme was then analysed in detail and sub-themes emerged. The themes were not pre-determined but identified by the frequency in the transcripts. All authors discussed the themes and searched for relationships between participants' responses according to the stage in their studies. The first and third authors validated the themes and sub-themes coded by the second author. Student perception of education in the clinical environment and their impression of the strengths and weaknesses of this model are reported. The study was approved by the University Human Research Ethics Committee

Results

In 2005 data was collected from 21 paramedic students using three focus group discussions. One group included students who had completed their first placement and two focus group discussions included those who had completed their final clinical placement. The majority of the participants were female (62%), the average age was 26, the majority (81%) were unmarried and Australian born (90%). The most common language spoken was English.

The data revealed four major themes:

- communication,
- appropriate placements
- capacity building and
- adequate preparation for students.

These themes and related issues are detailed, illustrated with participant comments.

Communication

Communication was an important theme which emerged from our study. Students reported feeling frustrated by a perceived lack of communication between the university and the

ambulance service staff who would be supervising and teaching them. This lack of communication was evident by ambulance staff being unaware of the arrival of a paramedic student:

> *Sometimes they weren't even expecting that you were coming. ... Half of them don't expect you. ... You turn up at 7 am and they say who are you? ...The branch gets the form [student placement notification] but the actual workers, who are on that day, I'm not sure if they look at the form*. [BEHP student, final placement]

Students also explained that the lack of communication between the university and ambulance service staff impacted on the ambulance service staff's awareness and knowledge of the new curriculum structure, especially the students' role and learning requirements. Students perceived that paramedics unknowingly cast students as "observers" rather than "participant observers":

> *I think a lot of them [paramedics] are not used to having observers who actually do stuff. They say you're an observer you're going to watch for the day. I know some people say you are strictly an observer today; you're not going to help out, you are just going to watch us*. [BEHP student, first placement]

As a result, students indicated that they were placed in an awkward position whereby they needed to state their learning objectives and outcomes at the outset of their placement:

> *You introduce yourself at the start of the day and tell them what you want to do. ... You have to get out there and say, I really want to do it. I really want to be hands on today and I can do it.* [BEHP student, final placement]

Appropriate placements

Students cited the placement location as a significant influence on their placement experience. Students placed with the rural ambulance service were located in one site whereas students placed in the metropolitan-area enabled students to move through multiple sites during block placements and gain experience in a variety of emergency situations. Those students in rural sites indicated that their experience was dependent on emergencies in their regional area which were often few and far between:

> *It depends on where you are as well. Metropolitan areas you're doing more work but when you're doing a rural placement you might not get a job for two or three days just because there are just no jobs out there, nothing's happening*. [BEHP student, final placement]

However, the lack of predictability of case load was not only evident in the rural area. Some students explained despairingly that over the course of their placements they had not acquired practical experience of major emergencies while others had a diverse range of experiences:

> *I've gone through the whole clinical placements in the ambulance and I haven't seen one cardiac arrest. I have only seen one sick patient who had asthma. It's been really limited about what I've seen.* [BEHP student, final placement]

> *To give you an idea of the dichotomy between the learning outcomes from different people, in the last prac[tice] I had four cardiac arrests and three hangings. That was*

> *potentially seven things that other people have missed out on but that's the nature of the work.* [BEHP student, final placement]

Whilst the case load may impact on their learning experience, the majority of students indicated that the relationship with their paramedic supervisor was also essential to developing key competencies. Those students based in metropolitan sites who constantly changed sites and supervisors did not cite added learning advantages. Instead these students commented on the necessity to build relationships with staff:

> *I went on a rural placement for three weeks and the same crews work in the area, the same branch. When I went to MAS [Metropolitan Ambulance Service] I did thirteen different branches, I was everywhere! I did one shift everywhere and it was like I had a job interview every single day.* [BEHP student, final placement]

Accordingly, building rapport with clinical staff was viewed as an important part of the placement experience and influenced student learning:

> *You have to build up a rapport with that person. … They need to trust you enough to hand patient care over to you. You can build that up if you're with the same person for one month. You'll know what they expect from you and you'll know what you'll be doing.* [BEHP student, final placement]

Capacity building

Students understood that the training of paramedics in Victoria, as elsewhere in Australia, is in a period of transition. Students openly acknowledged that ambulance service staff were also in a learning role (learning about the BEHP program) – much like the students – and everyone was doing the "best they could". Nevertheless, students were able to offer insights into how to build the capacity of the training program. Firstly, students identified the need for appropriately trained clinical educators:

> *They don't know how to deal with a student so there lays one of the problems. You'd like to think that everyone can take the role as an educator particularly when professional experience is such a necessity but not everyone has those skills to be able to do that.* [BEHP student, final placement]

Students perceived that clinical educators who were responsible and trained in teaching – much like clinical educators in nursing – would improve the quality of teaching and learning available to paramedic students. Some students who had a 'taste' of this indicated they preferred a staff member who was genuinely interested in teaching and had the time to work with students:

> *They would find an interesting patient or they would hear something interesting in someone's chest and they'd say "come and have a listen to this, it is good experience for you". People who were willing to listen to you and see what the university course is all about, someone who is interested in you and was willing to let you have a go but still be there to help you, most crews were pretty good like that. [BEHP student, first placement]*

> *We had a really good clinical educator who pulled us aside every single day to de-brief us and go through things with us. That made a world of difference*. [BEHP student, final placement]

Adequate preparation for students

Students also highlighted that appropriate preparation for placements was an important influence on learning:

> *The culture is the thing that I found confronting especially when I was exposed to ambulance culture. I'm not from a health background or hospital background so having to deal with those social interactions as well. … How to work in these certain team environments knowing what's required of you, and how to go about things basically*. [BEHP student, final placement]

Logistically, students indicated that they required adequate time to prepare for placements, particularly rural placements which required the student to organise accommodation, travel and often their part-time employment. Other students also noted that they required information about peer support during placements. One student noted that he had seen some "really horrific jobs" yet because he was on a placement in a regional area he was away from his usual support networks.

Discussion

The results of this study highlight some problems in clearly communicating information about the placement times and roles of the student. This may be due to intra-agency communication barriers or barriers between the university and health agencies.

Students are expected to develop a range of professional behaviours, and the clinical supervisors are expected to evaluate the student's professional behaviour against a list of desirable attributes. Communication issues between the University and clinical supervisors related to course aims and objectives – which include the development of professional behaviours – may impact on the teaching and assessment of these attributes.

This may also be complicated by the paramedic's understanding of their role in supervising university students, or their acceptance of this role. While students should ideally work with a qualified clinical supervisor, this varies between placement agencies. Some ambulance services cannot guarantee that the student will work with a qualified clinical instructor. Indeed, there is little opportunity to ensure that paramedics rostered to work with students are prepared for this role. In some instances it is clear that paramedics are unaware that students have been rostered with them and are unprepared for this role.

Given the acute care nature of the environment the ambulance service operates in it is not surprising that students identified the unpredictability of the case load both in terms of the number and type of events. While the placement should ideally be highly structured to make best use of the limited time available, the often unpredictable nature of paramedic work makes this difficult. The result is highly variable learning experiences within the same student cohort.

There is also role confusion among clinical supervisors. Who is responsible for the student's clinical education – the university or the clinical supervisor employed by the health agency? Although this was an issue identified in the study setting it is necessary to acknowledge that there are other models of university-based paramedic education in Australia such as those offered by Edith Cowen University[8] and Queensland University of Technology.[9] These models enable eligible students to gain employment with the local ambulance service before the completion of the course. However, the university has a responsibility to ensure that the

clinical practicum components of the coursework are completed at the prescribed standard to enable course completion.

Supervisors may feel under prepared for clinical supervision of university students, feel threatened by perceived limits of theoretical knowledge and find it difficult to answer student's questions. Students have traditionally been employees of ambulance services, whereas the BEHP students are not in an employee-employer relationship. This changes the dynamics between the clinical supervisor and the student. The responsibilities of the host agency are clearly different when the student is an employee. University students that self-fund their education understandably see themselves as consumers of an education service and expect a high standard of clinical supervision.

Students highlight the lack of time for placements within the course, and contrast this with the extensive on-the-job training that is a feature of the traditional vocational (post employment) paramedic training programs. However, the duration of the placement may not be as important as the quality of the clinical supervision. Indeed, poor clinical supervision may be counterproductive and lead to poor student morale and diminished motivation to proceed with their chosen course of study (personal communication, Lord[i]).

It could be argued that ambulance services are burdened with the dual demands of phasing out a vocational post employment course while also responding to increasing demands from universities for clinical placements for pre-employment students. At this time priority for clinical supervision is understandably given to students already employed by ambulance services who are either completing the on-the-job component of the vocational post employment course, or who are recent graduates undertaking post employment internship and orientation. As such, clinical placement of university students may be seen as an unwanted constraint on daily operations, producing additional burdens on clinical supervisors and the rosters department.

This paper focuses on ambulance service placements. Although similar issues have been identified in the nursing literature,[10,11] these studies involve quite different clinical environments that may limit the generalisability of the results to an ambulance setting.

In order to improve and maintain the quality of the clinical practicum for paramedic students, a united approach is required by the parties involved in the clinical education of undergraduate paramedic students. These are the ambulance services, students and the university. The ambulance services and the university must be willing to build the capacity of the ambulance service and its students, especially if poor clinical supervision is likely to impact on graduate outcomes.

At this time, an apparent solution to the often unpredictable and poorly controlled clinical practicum is for some ambulance services to develop post employment internships for graduates that resemble the traditional model of paramedic training. This approach may certainly compensate for lack of supervised clinical experience during the course, but results in a delay in the graduate employee achieving certification to practice independently. A one year internship (which is the current norm) appended to a three year undergraduate course results in four years of study to reach a point of independent performance. Strategies that aim to overcome the problems identified in this report have the potential to produce graduates who are better prepared to achieve operational readiness once employed.

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Conclusion

This study identified that students perceived four factors as influencing learning in the clinical practicum. These included:

- *Communication* between university and student, university and ambulance service, university and clinical supervisor, and vice versa, (including the clinical supervisor and student) as shown in Figure 1;
- *Appropriate placements*;
- *Capacity building*; and,
- *Adequate preparation* for students, including educational preparation as well as planning/logistical issues. For example, students should receive sufficient notice to prepare for a rural placement so that their preparation (i.e. travel and accommodation) does not adversely affect the educational experience.
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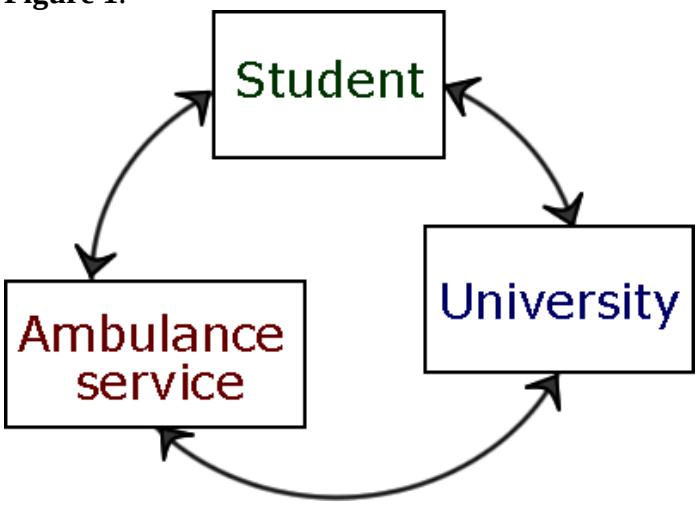
Figure 1.



While the preparation must also include selection of appropriate sites and clinical supervisors, this presents challenges to those paramedics whose primary responsibility is patient care in an acute setting and/or may not have sufficient training and/or time to teach students.

However, where the clinical practicum is part of the program, the question needs to be raised as to whether we make the current system better, or consider different approaches. Regardless, integrated relationships between the ambulance services, university and the student are required in order to improve the educational experience of undergraduate ambulance students. All parties need to ensure adequate placements and preparation (much of which is reliant on clear communication).

Continued review and monitoring of the practicum program as well as the relationships that are central to this process are required to foster the student learning experience, which impacts on graduate outcomes and the quality of patient care.

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