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Research

Operationalising the multidimensional role of the paramedic preceptor

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Abstract

Introduction
This study reports on a subset of findings from a recent doctoral study by the first author, which explored the lived experience of being a paramedic preceptor to novice paramedics in their first year of on-road practice.

Methods
A qualitative methodology underpinned by Gadamerian hermeneutics was chosen for this study. Semi-structured interviews were undertaken with a purposive sample of 11 paramedic preceptors from an Australian government-funded ambulance service. Interviews were audio-recorded and data analysis proceeded from the interview transcripts.

Results
Analysis revealed the paramedic preceptor to be a complex, multidimensional role that is operationalised within four key domains: coach, role model, socialiser and protector. Expectedly, a core function of being a paramedic preceptor is that of coach, supporting and scaffolding novices as they learn to apply theoretical knowledge in practice. Preceptors also appear to play an integral role in the professional socialisation of new employees, and are an important role model of professional behaviours and an empathetic healthcare provider. The paramedic preceptors in this study also viewed their role as a critical advocate for patient safety in the clinical practice environment. Advocacy and protection by the preceptor extended to the novice too, safeguarding their physical and emotional wellbeing during the learning process.

Conclusion
To our knowledge, this is the first study to specifically explore paramedic preceptorship from the perspective of preceptors in an Australian context. Therefore it provides an important contribution to understanding how paramedic preceptors operationalise this educative role in the clinical practice environment.

Keywords:
paramedic; preceptor; preceptorship; education

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Introduction

In this paper, we examine how the multidimensional role of the paramedic preceptor to novice paramedics during their internship year is operationalised. We do this by revisiting some of the findings of a recent doctoral study by the first author (1). Over the past few decades paramedic education in Australia has largely transitioned from a post-employment vocational model to the pre-employment model within higher education (2). Despite this transition, industry and academics continue to debate the road-readiness of graduates to practise at the end of their university degree (3). This is often described as a 'theory-practice gap' (4,5). Preceptorship offers an approach to mediate a bridging of this gap between theoretical learning in higher education and the clinical practice environment (3). Notwithstanding this ongoing discussion, agreement has ostensibly been reached that new graduates are expected to have at least a foundational level of competence to practise under supervision at the completion of their degree, and on gaining employment with an ambulance service, be able to practise independently at the end of a supported graduate internship year (6).

Support during this internship takes the form of the novice paramedic working closely with a paramedic preceptor. For the purpose of this study, a paramedic preceptor was defined as an experienced paramedic given the responsibility of providing one-to-one transitional support to a novice paramedic in their first year of on-road practice. In the study setting, this novice may be a newly graduated paramedic or vocational trainee. It should be noted that although the term 'experienced' paramedic is used, the reality in many ambulance services is that paramedics are being asked to perform this role early in their careers (2).

Background

Previous research has identified the period of transition to employment in clinical practice from higher education as a difficult and challenging period for new graduate paramedics; characterised by feelings of stress, anxiety, inadequacy and perceived deficits in both skill and knowledge domains (5,7,8). As with other professional health disciplines, paramedicine students undertake clinical placements as part of their university degree to facilitate learning in the practice environment with the aim of easing their transition from classroom to practising in the real-world (3). However, it has been reported that while student clinical placements provide an invaluable period for students to begin to contextualise their learning and integrate theory into practice (5), many students are not exposed to a sufficient number or diversity of cases commensurate with their scope of practice to adequately practise their skills or link theoretical knowledge with practice (9). Paramedic preceptorship during a postgraduate internship therefore remains an integral component in the formative education of novice paramedics.

Consistent with the Council of Ambulance Authorities (6) definition of readiness to practice under supervision, most university paramedicine programs in Australia still require new graduates to undertake a period of internship, albeit of variable form and length, at the completion of their degree before becoming fully qualified (3). As such, an effective and positive preceptorship is essential to the future preparation of graduate paramedics (10). The importance of this on-road period of education has been recognised as the signature pedagogy of paramedicine (3).

The Council of Ambulance Authorities (11) Paramedic Professional Competency Standards (PPCS) outline 'mentoring, teaching and development of others' as a core standard of paramedic practice. Further, the PPCS broadly acknowledge that this standard is achieved through guidance, support, sharing knowledge, role modelling, coaching and mentoring, and teaching of students, colleagues and others. A review of the literature however, finds that there is a dearth of empirical studies that elucidate how this standard and the education of novice paramedics is operationalised in the practice environment from the preceptor perspective. This doctoral study (1) sought to fill this gap in the literature by exploring the lived experience of paramedic preceptors. The focus of this paper is to report on a subset of findings from this research that specifically relates to how the role and responsibilities of the paramedic preceptor are being realised on-road.

Methods

Design

A Gadamerian hermeneutic (12) approach was chosen to conduct this study. Using a qualitative approach which favoured language and narrative to elicit data collection enabled exploration of the phenomena in rich detail and to develop an understanding of meaning from the perspective of the participants (13). Furthermore, because the principal researcher was an experienced paramedic and preceptor, by adopting Gadamer's philosophical notions of understanding as intersubjective and the achievement of a shared understanding through dialogue, this methodology was commensurate with the researcher authentically engaging in the research process as a co-participant.

Participants and setting

The study setting was a single state government-funded ambulance service within Australia. The study organisation employs over 4000 people, with 90% being operational staff employed to deliver frontline services. The organisation provides ambulance services to approximately 7.6 million people in metropolitan, regional and rural areas, across an area of 800,600 square kilometres. At the time the study was conducted, the study site accepted new entrant paramedics as new graduates with a tertiary paramedicine degree or vocational entrants without prior qualifications.

A purposive sample of 11 paramedic preceptors, plus the principal researcher as co-participant, participated in this study. Participants were recruited from current operational, qualified paramedics with experience in precepting a new graduate or vocational trainee paramedic on at least one occasion.

Data collection

Semi-structured interviews were conducted with each of the participants on a one-to-one basis at a time and place convenient to them. Before commencing the interview, written consent was obtained from each participant. Interviews were audio-recorded and later transcribed verbatim by a professional transcription service. These transcripts were provided in MS Word™ by the transcription service and subsequently uploaded into QSR NViVO 10™ to assist with data analysis.

Data analysis

Although space does not permit an in-depth description here, data collection and analysis were guided by Gadamer's (12) philosophical hermeneutics; in particular, the notions of prejudice, Bildung, the hermeneutic circle and a fusion of horizons. In Gadamer's (12) ontological view, prejudices are not necessarily unjustified or erroneous in the modernist sense, but constitute the initial directedness of our whole ability to experience the world; they give us our projections of fore-meaning from which to enter the hermeneutic circle in order to understand something. The hermeneutic inquirer therefore, does not make a vain and unattainable attempt to put aside or bracket away their preconceptions, but rather acknowledges their prejudices and places them at risk. In doing so, our prejudices become questionable and this opens us to the possibility that something new may be discovered and our prejudices may be challenged and (re)formed (12). Which brings us to the second notion that guided data analysis, that of having the character of Bildung. Gadamer (12) asserts that one must have the character of Bildung in order to come to understanding. It is a way of being, an attitude of being receptive to an otherness, a 'keeping oneself open to other, more universal points of view' (12). The third notion is that of the hermeneutic circle. When we wish to understand an other, we enter into a dialogical process of question and answer in an iterative process that tests one's prejudices against the horizon of the other. The hermeneutic circle is thus a metaphor of the productive nature of coming to understand; starting from our anticipation of meaning, our fore-projections, and moving back and forth until we reach a shared common meaning (12). The last notion discussed here is Gadamer's (12) fusion of horizons. Our horizon is metaphorically our perspective of the world, our historically effected consciousness from which we continually proceed in the world. In the interpretation of a phenomena, a shared meaning of understanding is reached when our own horizon and that of the thing we wish to understand 'are fused into a common view of the subject matter – the meaning – with which both are concerned' (14).

Ethical considerations

The consent form provided to participants outlined the purpose of the research, that interviews would be audio-recorded and transcribed, and stipulated that participation was free and voluntary, and that participants could withdraw at any time. Unisex pseudonyms were assigned to each participant to ensure confidentiality. Ethics approval was granted for this study by Charles Sturt University HREC under approval number 406/2012/11, and from the South Eastern Sydney Local Health District under approval number 13/022 (LNR/13/POWH/90).

Findings and discussion

An analysis of the data revealed that the operationalisation of the paramedic preceptor role to be a complex and broad ranging set of responsibilities that may be categorised into four key dimensions: coach, role model, socialiser and protector.

Coach

Participants in this study consistently described their role in the learning and development of a novice paramedic as being focussed on the novice's practice-in-context, rather than the delivery of informational content and only minimal instructional training in technical skills. In the laboratory setting, isolated patient assessment skills and interventions are learned and practiced. In the clinical practice setting, novice paramedics must take these learned routines and translate this knowledge into an embodied performance in a complex, unpredictable and often unsafe environment. Finding that preceptors are using strategies of support, guidance and advice, coaching would seem to be the most accurate description of the pedagogy being enacted between preceptor and preceptee:

> The clinical stuff is what they should be teaching you in school, and putting into practice and doing your job as a whole is what the training officer [preceptor] does. (Taylor)

> The main role I guess would be just to support them and make sure they're keeping on track with their education and their skill development … I mean they should already have the sort of knowledge in the back of their head from school, but really we're not here to be their primary knowledge giver in a way, they should have already had background information from college or from university … I should just be sort of mentoring and watching their skills on how they're actually doing it in a way. (Jordan)

Within this one-to-one coaching relationship, participants in this study expressed the importance of establishing an understanding of their preceptees as individual learners who have come to paramedicine with different backgrounds, skills and experience.

Novice paramedics can enter the profession through several different pathways. They may be new graduates from university, or they may be mature individuals who have become paramedics as a career change later in life. As such, although being a novice as a paramedic, they are likely to come with a breadth of experience and prior knowledge in other areas, including diverse clinical backgrounds such as nursing or one of the allied health professions. Effective adult learning embraces these individual differences and uses the knowledge of a novice's prior experiences to tailor the learning experience, which in turn makes the adult learning environment more effective (15):

> [You need to] listen to them [the novice], in the first short period, like the first day or two, hear where they're coming from, try and find out what their background is. They may not have just been a shop assistant all their life. I've had a few that are actually from a nursing background that had decided not to fast track, to come through the system the old way, through the VET system; and clinically they're switched on. (Kim)

> I always ask them what they've done previously to this job. Because there's plenty of times where you get someone who's a probationer and they say oh, I did medical science for three years at university, or you know, I was a doctor in another country but now I've moved here and I can't practise. Or ... one probationer I had, he was a nurse for a couple of years before he did this job. So not just looking at someone seeing blue on their epaulettes and thinking they don't know anything. (Andy)

Unique to paramedic practice from the other health professions is the mobility of the practitioner combined with an urgency of attendance. The ubiquitous lights and siren of an ambulance racing to a scene is well known. And with this, comes the skill of the paramedic navigating and negotiating pedestrians, traffic and weather in a safe manner. This skill of urgent duty driving requires experience and practice with real-time coaching from the preceptor:

> I think definitely initially in the driving aspect because I think that's a whole new world for everyone coming into the job, lights and siren et cetera, and the build-up, where there is – I think there's very little training, let's be honest, in how to do that. And we don't go through any defensive driving courses or anything. So that is largely probably up to the training officer when they feel that person's ready'. (Chris)

> But as far as service life, I think, driving is another, something I'd forgotten then, driving is 50% of the job and I don't think there's enough emphasis on driving skills. (Robin)

Interaction with patients is at the core of clinical practice. To bridge the learning of technical skills to application in patient care, simulation is increasingly being used in the undergraduate training of paramedic students within Australia to more closely replicate the 'real world' (16). However, some participants felt that the simulation environment does not provide the opportunity for students to learn to engage with real patients in a sensitive and empathic manner. Therefore, this aspect of the learning experience is more suited to internship:

> I actually for the last two shifts got a chance to work with a graduate that was doing their ride-along. So had a chance to work with them, which I haven't for a while, and I more or less let her go about how she would talk to patients or build a rapport and that sort of thing. She was good, she'd been out for a little while, but we were reflecting about how that's not really taught to them at university. They have this million dollar SIM room where they walk in and there's a mannequin lying on the ground and it coughs and vomits and talks to them, but they don't really have that chance to build a rapport, to communicate with the patients, understand body language or verbal cues, non-verbal cues. (Alex)

According to Wyatt (17) paramedic practice knowledge is often a tacit understanding and contextual 'knowing'. The characteristic of this embodied professional knowledge is knowing how to proceed in a given arrangement of circumstances, a sense of judgement and reflexivity between the present and experienced past. One participant, Alex, articulates the preceptor's facilitation of this knowing as imparting street sense:

> [Y]ou're just teaching them like the street sense I suppose, what to do when you're walking into somewhere. When to judge, like your instincts, or when to go by the book and do things the way your protocols say. (Alex)

Coaching further extends beyond the technical skills of paramedic practice to include non-technical abilities such as interpersonal and communication skills and psychosocial assessments. Communication is an important component of clinical care to establish rapport and facilitate patient assessment and treatment (5) Moreover, patient-centred communication leads to a positive patient experience by making patients feel safe, reassured and cared for as individuals (18). It has been reported that novice paramedics frequently struggle with their interpersonal communication skills, especially early in their transition to practice (5):

> A lot of the time it's just as simple as communicating with a patient, different culture, different people within the health service and other emergency service personnel. (Drew)

> I had a [graduate intern] not that long ago that came out and it was, we've got to do three sets of obs on every patient. The first thing he would do when he walked in was kneel down and take the blood pressure. I was like 'Aren't you going to introduce yourself? Who are you?' [The intern's response was] 'Oh, well, we've got to get a base set of obs... we were always taught that you have to'. 'No, well, you do need a base set of obs, but talk to the patient first'. (Kim)

> You can get [graduate interns] from the university that have gone to uni at 18 and they finish their degree at 21 or 22 and they get a job at 22 and they can't communicate with someone … I'll give you an example, I had a person who's been a young probationer and they couldn't at all empathise, not that we all want to sympathise, but empathise with a 40-year-old male, 40 or 50-year-old male that has just tried to hang himself because he caught his wife having an affair and then she ended up getting the children as well, gaining custody of the children … And the patient said to him (the intern), he goes, what would you know, you don't know anything, you're all but 22, what advice have you got to give me? And it was true, he pretty much dumbfounded him and he nothing else he could say. But that's where I kind of jumped in and said look, I can't understand what you're going through, but I know that you wanting to hurt yourself and harm yourself is not the right way of doing this because you've still got your children you know. And he (the intern) didn't have the life skills or like the advanced life experience in a way to understand that and use that as an approach. (Jordan)

Inter-professional collaboration is also an important component of paramedic practice. Novice paramedics must be able to learn to effectively communicate with not only other paramedics, but with other medical staff and those from other response agencies:

> So interacting with triage nurses, bedside nurses and doctors when you have to give a handover. And just being confident in yourself and talking in a good, loud, strong voice, trying not to stop, um, ah and those sorts of things. And she (graduate intern) agreed, that it's not really anything that they teach them or they don't usually teach them a lot of those things at the university. It's a lot of clinical stuff, it's a lot of anat/phys, skills-based, not really interpersonal communications. And it's something that takes a long time to develop. I don't think you can really teach it in a classroom. (Alex)

With a biological model predominating healthcare, presentations to emergency departments of hospitals, particularly for older persons, assessment often focusses on the specific presenting clinical problem and neglects to assess the psychosocial, occupational and functional needs of patients; despite these being independent risk factors for unplanned readmissions (19). Providing clinical care in a person's home often provides paramedics with a wealth of information on psychosocial impacts of their patient's health and wellbeing which can be passed onto medical staff. Paramedic preceptors in this study recognised that this is an important dimension of assessment to emphasise to their neophyte practitioner, much different from the clinical simulations students experience at university:

> We have to do scenarios on dummies, they don't look like people. You can walk into a room and work out so much about a patient without even talking to them but if you walk into a room with a manikin, it doesn't give you anything. You might look at someone's living situation, the clothes they're wearing to see how they care for themselves, if they have family to take care of them … their perfusion, a manikin doesn't have colour, it doesn't sweat, it doesn't make noise, it doesn't live anywhere and you can get so much from that when you're in actual person's house ... so yes you can learn how to do a skill but when the patient you're treating is a human being I think that's very different. (Sam)

A key coaching strategy utilised by paramedic preceptors was found to be facilitated reflective practice. Being a reflective practitioner is recognised as a fundamental characteristic of professional paramedic practice (20,21):

> So I think it's alright to say to a trainee 'Do something'. But if you don't then visit it and say 'The reason we did it is', or 'The reason we didn't do it', and that's probably a bigger issue, when you don't do something, why we didn't do something, if you don't tell them why, they're not going to learn. They know the book says to do it, we didn't do it. 'So we don't do it ever?' 'No, we didn't do it in this case because of', whatever the reason. So I think debriefing jobs, it's one of the tricks I use. (Kim)

> Talk them through every single step of the way, and you can't do that on every job, but if you pick out something on each job and then reflect back and go, 'Well, this morning where did you park the car? Does that apply this time? How did you answer the door? How did you stand, or where did you stand when they answered the door? When you walk into a room what did you notice? Was there anything out of the ordinary? So you didn't notice the knife on the table? You're supposed to.' (Taylor)

> I'd talk to my probationer afterwards and I'd recap that and I'd say look, we haven't done this before, what could we have done better? What would you do next time with the knowledge you now have? What did you do wrong? All those kind of things. We'd go through each job, I'd try and get out as much as I could, just to help build them up and show them where they could do things better, where they did things well. (Andy)

> After every job, you say to someone how do you think that job went? What would you like to do differently? What did you learn from it? What did you expect me to do for you? (Sam)

An additional coaching strategy was for preceptors to create opportunities for learning in the practice environment. This strategy was revealed in several different ways, but the goal was always to maximise the 'learning moments' available for the novice. With case assignment to each ambulance somewhat by chance, with most cases matched by closest ambulance resource, sometimes preceptors would attempt to be allocated a specific case where they felt this would offer a learning opportunity for their preceptee. The jargon is 'to jump a job':

> [I]f I hear a [cardiac arrest] go down … we'll clear for that straight away. Because they need that experience. So you are jumping jobs that you would normally not jump. Because let's face it, there's some jobs that you just would prefer not to go to … [but] all of a sudden you think 'Well, they have never done something like that, I'll jump the job'. (Kim)

> If there's something like a code 9 [trapped patient] or a cardiac arrest or a stabbing or shooting, by all means I'll say we're clear and can assist with that. You try and get them into it that way. (Drew)

Participants also sought out learning opportunities by encouraging novices to learn through observation of patient care inside the emergency department and to gain a more holistic view of the patient's treatment:

> [I]f there's an interesting job or an interesting patient and given that we're not pushed for doing another casualty or whatever obviously, um I'll try to say, 'hey let's go and watch this and let's go and do this.' (Charlie)

> [E]specially if it's a big trauma or something unusual, and they are doing chest thrusts or whatever for extreme asthma or something, then – because the stuff you wouldn't see often, or how they might treat pulmonary oedema or what it sounds like, and stuff that's really important to get a grasp on, but you mightn't have come across it in a year or two, or whatever. So yeah, try and make them available to get into it, sort of thing, yeah. (Leigh)

The coaching dimension of paramedic precepting is itself a complex role. It has been identified in this study the learning and development that occurs during the internship is more than applying theory to practice; instead, this pedagogical approach is a guided facilitation of knowledge translation, where the novice builds on their foundational knowledge from university and develops a practical, embodied know-how of paramedic technical and non-technical practices.

Role model

According to Chapleau (22) the paramedic preceptor may be the most important person in moulding a novice's attitudes and behaviour. Role modelling was used in all aspects of the position of paramedic preceptor, whether interpersonal interactions with patients, colleagues or managers, driving and adherence to organisational policies and procedures:

> ... from me they would get the right way to do things. I try to be as professional as I can with patients, with hospital staff, colleagues, as what I can be. ... they've got to learn that there is a time and place to joke around and a time and place to be serious and game face sort of thing, so to speak. (Drew)

> And the trainee will feel how the training officer performs, too, whether it be driving or whether it be talking to patients, or whether it be talking to management, I think that's really like a sponge, I'm sure, in the first few months. So I think setting that example is important and staying within the guidelines. (Chris)

> At the start it's totally beyond them, but towards the end of their training they should really be taking in what you're doing as well as what they're supposed to be doing. So it is a role model when you're doing your job and you're doing it properly, then they should notice that as well. (Taylor)

Myrick and Yonge (23) suggest an effective role model is not based on a dialogue of telling a person how to behave, but demonstrated in the every day actions of the preceptor in the practice environment. Paramedics in this study similarly reported that preceptors must 'walk the walk', emphasising that the novice is more likely to emulate how the preceptor behaves, rather than what they say should happen:

> If I say, 'Oh, you need to build a rapport with that patient,' then I go to the next patient and go, 'Come with me,' be abrupt and stern and not be patient, it's not going to – it's going to fall on deaf ears. So I guess it's like any leader. People learn from the leader's actions rather than their words. (Chris)

> Yeah, that's attitude, it's everything. It's what you actually do, what you say, it's your attitude, it's how you interact with your colleagues, how you interact with hospital staff, police, everything. (Taylor)

> I guess the best way I do this, for me, is try and lead by example. I let the probationers see how I build a rapport with the patient, how I talk to them. And hopefully try and get my probationer to emulate that. Because being able to build a rapport with someone who you're a complete stranger with, when you're walking in to their bedroom and they're you know, can be stark naked lying in their bedroom at their most vulnerable.

> You've got to be able to build a rapport quickly with that person. Let them know that you're in charge, you're controlling the scene and you're going to look after them. And that you're someone who they can feel supported by and not threatened and hopefully if I can demonstrate that my probationer takes that on and I feel like I've done my job. (Andy)

Preceptor as role model is an embodiment of being professional. Role modelling allows preceptors to demonstrate how professionalism is enacted in practice, and what it means to assess and care for patients in a sensitive and empathetic manner. Building trust and rapport with patients, their families, bystanders and other health professionals is a key part of paramedic practice. Paramedic preceptorship allows novices to see how this occurs by their experienced colleague's interaction with others.

Socialiser

Newly graduated paramedics and trainees entering the workforce undergo a period of being socialised into the realities of practice. This includes familiarisation of local practice and the culture of ambulance, but also a reconciliation of the dissonance between romanticised expectations of the profession and being a paramedic (24,25). Ambulance internship represents a challenging period for new graduates (25) as they internalise the norms and standards of paramedic practice and begin developing their own professional identity and a commitment to the profession (24). The paramedic preceptor plays a key role in the socialisation of the new employee into the organisation by introducing them to colleagues, orientating them to workplace practices and introducing them to cultural norms of the workplace (26).

Participants in this study socialise their novices through a range of strategies. Facilitating a sense of belonging was achieved through introduction to colleagues and managers, but also the practical aspects of lockers and station familiarisation:

> I think, for me personally I take the point myself of introducing them to everyone and let them know how things are and what's happening, just so they feel included. (Andy)

> It's up to me to introduce them to people to show them the station ... Once we've gone through the car I will introduce them to [the station manager], allocate them a locker and show them around. (Sam)

> But it means that they know where the store is, they know where the fridge is, the tea fund, they know where their locker is, all that sort of thing. (Kim)

Reducing culture norms and expectations to a tangible, concrete form is difficult. However, preceptors in this study felt they were in a position to impart this intangible knowledge to the preceptee, guiding the novice in their early introduction in the unwritten omponents of practice:

> So I guess it would be to impart my experience, knowledge onto that junior officer in the sense of, I guess clinical abilities but not only that, all the culture of the organisation that we work with, all the unspoken kind of rules that people don't actually tell you unless you're mentor to the [trainee]. (Charlie)

> There is definitely a culture and there's a lot of unwritten rules that it's just expected that you know and follow, and you definitely have to teach your trainees those rules. You don't want them to make a mistake because they're not aware of a particular rule. (Alex)

> I think part of what's expected, I suppose, like in terms of maybe part of their culture of – equipment and who does – the driver does the – has the portable and is responsible for which roles of – and saying who does what, and what you'd need [intensive care] backup for, and what you'd need Inspectors for and – because I think a lot of that stuff, well, I don't think when I was getting trained, I don't think a lot of that stuff was very clear at [university/the education centre]. (Leigh)

Protector

The fourth key dimension of the paramedic preceptor role to emerge in this study was that of protector. This role of protector operates in two directions. Firstly, because the paramedic internship is a learning environment, the preceptor acts to ensure the novice's practice while learning is performed in a safe manner. Modern paramedic practice has seen significant advances from a predominantly transport focused service to the provision of professional out-of-hospital clinical care (27). The scope of today's practice for paramedics includes a wider range of medications and invasive procedures than ever before. Paramedics now make important investigations and decsions on time-critical health conditions such a stroke and myocarial infarctions. Learning in this setting means greater potential risk and the need to ensure pateint safety is never compromised. Supervised practice during the paramedic internship therefore provides an important safety net. Preceptors in this study strongly recognised their role in patient safety:

> Because patient safety is the most important thing we do. (Drew)

> The sense of personal responsibility for patient safety was tangible in the responses of all participants. Each reported feeling that they were responsible for the actions of the novice:

> It always comes back to the [training] officer (Sam).

> You have the responsibility of the vehicle, you're the senior clinician. If someone was to go pear shaped it would more than likely be on your head as to why it happened or why it went that way. (Alex)

> Essentially the buck stops with us, being the only qualified operator in the car. And if something happens that compromises their safety it's pretty much our fault. We should be there to watch them like a hawk, so to speak. (Drew)

Participants reported using several strategies in operationalising this aspect of the preceptor role. Listening and open communication between preceptor and preceptee appear to be key:

> I wouldn't take a back seat and just drive and not be aware of what's going on in the back of the ambulance. I'm listening to what's being said in the back. (Sam)

> Well … depending on what sort of patient we have but I would often say, well what are the [oxygen levels] now, or what is the heart rate now? If we're giving fluids for a hypotensive patient, what's the blood pressure now? ... I'm not just letting them write it down and me not know because it's up to me. So I always ask or get them to call it out, heart rate 80, blood pressure whatever it might be. (Robin)

Despite the internship being an experiential learning period, preceptors sometimes felt that patient safety requires the novice take a more observational learning approach while the preceptor assumes care for the patient:

> [W]hen you've got a sick patient in the back and they are treating for the shift, often I've swapped and got them to drive and I'll treat, because I'm not yet comfortable with them being competent enough to deal with that situation … But I think it's about the patient, it's not about – like, it's not always about training the probationer. Sometimes it's actually more about the patient, because their welfare needs to be considered, because that's why you're there. (Chris)

> But again if the patient is critical or unstable, I would remain with the patient. (Robin)

> If the patient's ever that critical where I think that I shouldn't be leaving the probationer with the patient to do something, I'll say how about you go to the car, you get this and I'll continue on with the patient. (Drew)

In addition to responsibility for patient safety, it also emerged in this study that the paramedic preceptor is protector of the novice during their internship. Paramedic practice often operates in uncontrolled and potentially dangerous circumstances. Providing care involves operating in environments such as construction sites, by the roadside, and in poor lighting. It also involves working with patients and bystanders that may have serious mental illness or are affected by illicit drugs and alcohol. A recent study by Maguire et al (28) found Australian paramedics were at risk of serious injury at a rate seven times higher than the national average. Preceptors in this study were cognisant of their role in ensuring that novice paramedics unfamiliar with the dangers of paramedic practice remained safe:

> I would do it mainly before arriving on scene [such as] a violent scene or to a car accident or something. You can discuss how you park and position the vehicle for a speedy getaway or just to look out for X, Y, Z when you go inside the house. If you're suspecting they're going to be a violent patient you want to make sure you've always got an escape plan sort of mapped, marked out, that sort of thing. (Drew)

> Yeah there's also like the element of like your own safety and rather them almost being naïve about things and not really looking at the bigger picture in terms of maybe it's an unsafe house or an unsafe area and just doing some little things that you've been around for a while. It's not taught to you, it's just something that you learn and they haven't had that experience to learn. You know, walk into a house, make sure the front door is unlocked and you can open it again, rather than letting patients lock doors behind you. (Alex)

> Depending on where they come from, they may never have come into any situation where their wellbeing might be threatened. So really naïve as to what could happen; the fact that we're in uniform, we can be targeted and if they've not worn a uniform before they probably don't know that either. So you have to educate them as to what could happen, how to prevent it, and if it does happen, what to do after that as well; so all aspects of safety is really what you need to teach them, depending on what their background is. (Taylor)

Safety of the novice paramedic also extended to preceptors looking after the novice's emotional wellbeing too. Preceptor guidance and support can assist novices with their self-confidence and maintaining realistic expectations of their learning curve:

> You need to be able to guide them, so if they're going down the respiratory pathway but you think it's cardiac, you need to be able to bring them back without making them look like they don't know what they're doing in front of the patient, and that's a trick on its own to try and steer someone without decreasing the people's confidence in them, and their own confidence in themselves. (Kim)

> And just basically the way I do it is just try and guide them along and yeah, make them feel comfortable, give them a chance to make mistakes within reason, so long as they're not big ones. But let them learn things for themselves too. But act mostly as a guide and someone who's going to be there to support them. (Andy)

In addition to the environmental risks of practice, the paramedic is routinely exposed to circumstances involving human suffering, pain and death. These cases can be highly stressful and a hazard to the emotional health of the paramedic, exposing them to an increased risk of developing post-traumatic stress disorder (PTSD) (29). Paramedic rates of PTSD have been reported as some of the highest of all industries, including those of other emergency services (30). Monitoring and acting to ensure the emotional wellbeing of the novice paramedic is therefore an important function of the preceptor role. All the participants in this study recognised the need for providing psychological support to their novice, which also includes knowing when to escalate support to professional services:

> You are their main mentor, and who else is going to check up on them? Management is certainly not, and educators aren't, certainly. So I think that's again an added responsibility, that their welfare personally comes into it too, their emotional stability and their ability to take various scenes on board, whether it be emotional, whether it be traumatic, or whether it be challenging for them.
>
> Everyone's got a different background, so there will be different triggers for different people. So until you know what their triggers are, I think it's important to follow up on their welfare, because it's not just a desk job. (Chris)
>
> You'd still help them out with everything, so most definitely an emotional assistance is there as well because if they've got kids of the same age that you go to a job, if they've got a parent that's gone through a similar thing, if they've got a history of being in a car accident, and they don't divulge that sort of stuff but at the end of a job you notice that there's something wrong, if you can help them get over that then you're going to help them deal with the job in general. (Taylor)
>
> It's probably a large, probably one of the more important roles in emotional support of a trainee, because we're the ones face-to-face with them every day and we should be able to recognise when something's wrong or what not and be able to firstly try and assist them small as possible or recognise when you have to refer them on to management or the assistance programs to be supported, chaplaincy, depending on what's going on. (Drew)
>
> I remember talking to this person and I said look, you know, if you ever want to talk to me about this, or you're not sure, or you're upset, I said give me a call, I'm more than happy to chat about it with you ... But this person I made sure they had that support as well. And that they knew other services and areas they could go to talk to as well if need be. (Andy)

The preceptor as protector is perhaps the most important, yet under recognised, dimension of the preceptor role.

Study limitations

This was a single centre study and therefore the findings may not be generalisable to all ambulance services. As there is currently a limited number of empirical studies exploring ambulance preceptorship form the perspective of the preceptor, further studies from different services, and from different countries, would be useful in building a body of knowledge on this important area of paramedic education.

Conclusion

In this paper we have discussed some of the findings of the first author's recent doctoral study into paramedic preceptorship. We have chosen to focus on elucidating the preceptor as a multidimensional role consisting of four key dimensions: coach, role model, socialiser and protector; highlighting how paramedics operationalise their understanding of each dimension in the practice environment. Despite the transition from higher education to clinical practice being a challenging time for novice paramedics, the preceptor can ease this transition by providing a scaffold of support across the technical and nontechnical aspects of paramedicine.

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Conflict of interest

The authors declare they have no competing interests. Each author of this paper has completed the ICMJE conflict of interest statement.

References

1. Carver H. The paramedic preceptor experience: improving preparation and support. Charles Sturt University; 2016.
2. Edwards D. Paramedic preceptor: work readiness in graduate paramedics. Clin Teach 2011;8:79–82.
3. Willis E, Pointon T, O'Meara P, McCarthy C, Lazarsfeld-Jensen A. Paramedic education: developing depth thorough networks and evidence-based research. Australian Learning and Teaching Council Ltd.; 2009.
4. Cheraghi MA, Salsali M, Safari M. Ambiguity in knowledge transfer: the role of theory-practice gap. Iran J Nurs Midwifery Res 2010;15:155–66.
5. Lazarsfeld-Jensen A, Bridges D, Loftus S. Transitions: command culture and autonomous paramedic practice. Bathurst: School of Biomedical Sciences, Charles Sturt University; 2011.

References (continued)

6. The Council of Ambulance Authorities. Guidelines for the Assessment and Accreditation of Entry-level Paramedic Education Programs. 2014.
7. Huot K. Transition support for new graduate paramedics. Victoria, Canada: Royal Roads University; 2013.
8. Kennedy S, Kenny A, O'Meara P. Student paramedic experience of transition into the workforce: a scoping review. Nurse Educ Today 2015;35:1037–43.
9. Michau R, Roberts S, Williams B, Boyle M. An invesigation of theory-practice gap in undergraduate paramedic education. BMC Med Educ 2009;9(23).
10. Lazarsfeld-Jensen A, Bridges D, Carver H. Graduates welcome on-road: a culture shift in ambulance preceptorship made clear through retrospective analysis. Focus on Health Professional Education: A Multi-disciplinary Journal 2014;16:20–30.
11. The Council of Ambulance Authorities. Paramedic Professional Competency Standards. 2013.
12. Gadamer H-G. Truth and Method. 2nd revised edn. London: Continuum Publishing Group; 1989/2004.
13. Houser J. Nursing research: reading, using, and creating evidence. 3rd edn. Burlington, MA: Jones & Bartlett Learning; 2013.
14. Linge DE. Philosophical Hermeneutics: University of California Press; 1977.
15. Knowles M, Holton E, Swanson R. The adult learner: the definitive classic in adult education and human resource development. 7th edn. Oxford: Elsevier; 2011.
16. Boyle M, Williams B, Burgess S. Contemporary simulation education for undergraduate paramedic students. Emerg Med J 2007;24:854–7.
17. Wyatt A. Paramedic practice - knowledge invested in action. Journal of Emergency Primary Health Care 2003;1(3–4).
18. McCabe C. Nurse-patient communication: an exploration of patients' experiences. J Clin Nurs 2004;13:41–9.
19. Deschodt M, Devriendt E, Sabbe M, et al. Characteristics of older adults admitted to the emergency department (ED) and their risk factors for ED readmission based on comprehensive geriatric assessment: a prospective cohort study. BMC Geriatr 2015;15:54.
20. Sibson L. An introduction to reflective practice. Journal of Paramedic Practice 2009;1:121–5.
21. Turner H. Reflective practice for paramedics: a new approach. ibid. 2015;7(3).
22. Chapleau W. Field Training officers improve EMS delivery. Fire Apparatus Magazine 2007;12(3).
23. Myrick F, Yonge O. Nursing preceptorship: connecting practice and education. Philadelphia: Lippincott Williams & Wilkins.; 2005.
24. Weidman J, Twale D, Stein E. Socialization of graduate and professional students in higher education: a perilous passage? San Francisco: ERIC Clearinghouse on Education; 2001.
25. Devenish AS. Experiences in becoming a paramedic: a qualitative study examining the professional socialisation of university qualified paramedics: Queensland University of Technology; 2014.
26. Baltimore J. The hospital clinical preceptor: essential preparation for success. J Contin Educ Nurs 2004;35:133–40.
27. Joyce CM, Wainer J, Piterman L, Wyatt A, Archer F. Trends in the paramedic workforce: a profession in transition. Aust Health Rev 2009;33:533–40.
28. Maguire B, O'Meara P, Brightwell R, O'Neill B, Fitzgerald G. Occupational injury risk among Australian paramedics: an analysis of national data. Med J Aust 2014;200:477–80.
29. Lowery K, Stokes M. Role of peer support and emotional expression on posttraumatic stress disorder in student paramedics. J Trauma Stress 2005;18:171–9.
30. Drewitz-Chesney C. Posttraumatic stress disorder among paramedics. exploring a new solution with occupational health nurses using the Ottawa Charter as a framework. Workplace Health Saf 2012;60:257–63.