Student paramedic perceptions of a non-ambulance practice learning experience

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Background: The role of the paramedic has changed significantly over the last 10 years. In order for paramedic students to gain the necessary skills and knowledge to effectively manage the increasing complexity of patient presentations a wide range of placement opportunities are required to support learning.

Objective: To explore first year student paramedic experiences of non-ambulance placements.

Design: A qualitative study

Methods: Semi-structured interviews and thematic analysis was used to explore first year student paramedic's experiences of non-ambulance placements. The study took place in one higher education institution in England, UK.

Results: Thirty-three first year BSc (hons) Paramedic Science students agreed to be interviewed. All the students had undertaken at least one non-ambulance placement within a hospital setting. Four key themes that emerged from the transcripts, Expectations, The Patient Journey, Communication and Mentorship.

Conclusion: In order to prepare students for the future, to deliver quality care and to improve patient outcomes a variety of educational opportunities is crucial. There remains work to be done supporting clinical mentors, tearing down barriers between professional groups and exploring our similarities and strengths.

1. Introduction

The paramedic scope of practice within the United Kingdom (UK) has witnessed numerous proliferative changes over recent decades, owing to significant advances in national policy and the increasingly undifferentiated demographic of the urgent and emergency disciplines (Department of Health (DoH), 2005; Association of Ambulance Chief Executives (AACE), 2011; National Audit Office (NAO), 2011; National Confidential Enquiry into Patient Outcome and Death (NCEPOD), 2007; NHS England, 2013). These changes are not unique to the UK, but are congruent with an international

paramedicine paradigm shift (Xiang-Yu et al., 2013; Smith, 2015; Jones & McGillis, 2013). Subsequently, UK undergraduate paramedic education has observed a similar transformation to recognise and align wider healthcare initiatives, culminating in the evolution of an all-graduate profession as of 2021 (Health & Care Professions Council (HCPC), 2018; College of Paramedics (CoP), 2017).

As an integral part of the current UK undergraduate paramedic curriculum, students spend a proportion of time with non-ambulance healthcare professionals. This represents a substantial and notable opportunity for both interdisciplinary learning (HCPC, 2017) and work integrated learning (Delisle & Ebbs, 2018). Consequently, it is therefore necessary to establish students' perceptions of this learning experience, in order to fully understand and synthesise the impact of contemporary paramedic education upon the readiness of future paramedic registrants. Comprehension of such practice-based learning perceptions will offer a very valuable insight into an ever-evolving area of undergraduate paramedic education.

This paper reports the findings of a qualitative study exploring the perceptions and experiences of first year student paramedics undertaking non-ambulance placements.

2. Background

Evolution of the paramedic role, including changes to prescribing legislation, have enabled paramedics to operate and function within an ever-expansive healthcare system (CoP, 2017). Potential scopes of practice have deviated away from the traditional prehospital discipline, offering paramedics new opportunities in a range of clinical, academic, managerial and research settings (CoP, 2017). These developments compound the importance of work integrated learning strategies, enabling the modern paramedic to function effectively within a range of wider healthcare environments (HCPC, 2017; Delisle & Ebbs, 2018).

Historically, UK paramedic students were placed in acute and critical care settings with a focus of achieving technical proficiency within a predominantly dexterous skill set. However, contemporary paramedic practice requires an enhanced and analytical repertoire of cognitive skills, compounding and assuring critical thinking in the development of a robust and resilient care construct. The need for this strengthened efficacy in practice was causally identified following the Paramedic Evidence-Based Education Project (Allied Health Solutions, 2013). Consequently, a greater emphasis was placed on clinical specialities not typically synonymous with prehospital care (CoP, 2017). The drive to develop autonomous paramedic practice culminated in strengthening practice-based inter-professional learning links and active participation within wider healthcare systems (Allied Health Solutions, 2013; CoP, 2017; HCPC, 2014, 2018; Xiang-Yu et al., 2013; Smith, 2015; Jones & McGillis, 2013).

'Road-ready' paramedics (Lucas et al., 2014:242) need to be more than just emergency responders, and the modern paramedic is required to be a holistic, person-centred health practitioner (Lucas et al., 2014:242). Ruston and Tavabie (2011) inferred that paramedic clinical skill acquisition must satisfy the broader healthcare context and practice experiences must therefore be sought from a wide range of clinical settings. Indeed, the HCPC (2014, 2018) and the CoP (2017) mandated effective early interdisciplinary practice-based learning (clinical placements outside of the traditional pre-hospital environment) to be a vital and integral component to holistic paramedic education programmes. Whilst it is essential that student paramedics be fully conversant and proficient in a

range of prehospital practices, students must also critically acknowledge their presence as future clinicians within the broader paramedicine demographic (CoP, 2017).

The provision of non-ambulance placements within a structured programme of education ensures and safeguards students' exposure to a range of clinical care specialties and environments (CoP, 2017). This aids development of transferable skills whilst increasing functional knowledge of how the contemporary paramedic interacts with various stakeholders and contributes to the continuum of care (HCPC, 2014, 2017, 2018). Internationally, pedagogical approaches vary to paramedicine work-integrated learning (Xiang-Yu et al., 2013; Smith, 2015; Jones & McGillis, 2013; Delisle & Ebbs, 2018). It does appear consistent however, that interdisciplinary scholarship enhances the overall quality of experiential learning and assists development of a more rounded paramedic (CoP, 2017; HCPC, 2014; Delisle & Ebbs, 2018; Xiang-Yu et al., 2013; Smith, 2015).

3. Methodology and Methods

3.1 Objective

This study aimed to explore first year student paramedic's experiences of non-ambulance placements.

3.2 Design and Setting

The paper presents the findings of a qualitative study using semi-structured interviews and thematic analysis to explore first year student paramedic's experiences of non-ambulance placements. The study took place in one higher education institution in England, UK.

3.3 Participants

Study participants were all first year BSc Paramedic Science students. Participant demographic information can be found in Table 1. First year students were chosen as they have had no previous clinical experience as a student paramedic. All the students had undertaken at least one non-ambulance placement within a hospital setting lasting a minimum of two weeks. Placement areas included general medical, surgical, respiratory and orthopaedic wards and all mentors were registered nurses (Table 2). Students and clinical mentors received a guidance document which includes a list of competency standards and assessments and a placement checklist prior to the placement. The competency standards reflect the College of Paramedics Curriculum for student paramedics (CoP, 2017) and include technical and non-technical skill acquisition including vital sign measurement, ECG interpretation, communication and professional behaviour.

Table 1 – Participant demographics

Participant	n=	% of data set
Male	12	36%
Female	21	64%
Age 18/21	21	64%
Age 21-25	1	3%
Age 26-30	5	15%
Age >30	6	18%

Table 2 – Placement allocations

Placement Type	Specialty
Medical	Stroke Rehabilitation
Medical	General Medical Admissions
Medical & Surgical	Emergency department
Medical	Specialist Rehabilitation
Medical	Acute Medical Unit
Medical & Surgical	Cardiothoracic
Medical	Respiratory
Surgical	Cath Labs, Recovery & Observation Ward
Surgical	Endoscopy
Medical & Surgical	Orthopaedics
Medical & Surgical	Neurological
Medical & Surgical	Renal Nurse Specialists & Dialysis Unit
Medical	Primary Care
Medical	Unscheduled Care (Primary Care)
Medical & Surgical	Minor Injury / Illness Units

3.4 Ethical Considerations

Full ethical approval was obtained prior to the start of the study from University of Hull, Faculty of Health Sciences ethics committee. A call for participants was circulated amongst the potential participants by the Principal Investigator (PI) using the University's Virtual Learning Environment. Potential participants that expressed interest in the study were send a participant information sheet and given 7 days to decide whether to take part in the research. Participants who wished to be recruited into the study had an interview arranged at their convenience. Consent was taken immediately prior to the interview. Care was taken to ~~de-identify~~ anonymise quotes used throughout the study and participant numbers were used.

3.5 Data collection

In-depth, semi-structured interviews were conducted at a time and place convenient to the participants. The interviews were undertaken by all four members of the research team and audio recorded with the participant's permission. An interview protocol was used with open ended questions exploring the perceptions of non-ambulance placements for student paramedics. On average the interviews lasted 30 minutes. The six trigger questions used were:

1. Tell me about a non-ambulance placement that you have had. How has this been useful in your training so far?
2. Why do you think you undertake non-ambulance placements? What are the advantages / disadvantages?
3. What do you think are the barriers (things that make the placement difficult) to non-ambulance placements?
4. What do you think makes the non-ambulance placements better for you?
5. How do you feel about your next non-ambulance placement?

6. Do you feel non-ambulance placements assist in your readiness to work within the wider health care setting?

3.6 Analysis

All interviews were professionally transcribed and checked for accuracy by NC with initial emergent areas of interest noted. Transcripts were analysed using thematic analysis by AR. The process started through initial reading of the transcripts and emergent areas of interest noted. Transcripts were coded line by line. Hierarchical coding began with broad themes which became successively narrower and more specific. Themes were organised and summarised following analysis of the first few transcripts and a coding 'template' was developed through comparison of coded transcripts and discussion which was then be applied to the whole dataset and modified in the light of careful consideration of each transcript. Once a final version was defined, and all transcripts were coded to it, the template served as the basis for the researchers' interpretation of the data set and the presentation of findings. This analytical approach ensured attention to: clarification and justification; procedural rigor; representativeness; interpretive rigour; reflexivity and evaluation rigor; and transferability (Miles and Hubermann, 1994).

4. Results

Thirty-three first year BSc (hons) Paramedic Science students agreed to be interviewed. The participants described feelings of excitement, apprehension, optimism and nervousness about their non-ambulance placements. 29 out of the 33 participants stated that non-ambulance placements assisted in their readiness to work in the wider healthcare sector especially in relation to transferability of knowledge. They all felt that they had learnt how to be proactive in taking learning opportunities as they presented themselves during each placement. Four key themes that emerged from the transcripts were:

- Expectations
- The Patient Journey
- Communication
- Mentorship

4.1 Theme: Expectations

It became evident from the interviews that the participants felt that there was a disconnect between their own expectations of being a paramedic as well as those of staff within the non-ambulance placement areas. 18 participants stated "they [ward nurses] did not know what to do with us as student paramedics" often asking "why are you here" "Why do we have a student paramedic here?" They discussed the need to be proactive with their learning.

"I felt as if the staff, they didn't really understand why I was there if I'm honest, but once you've explained they kind of involved you and said come and look at this and you might be interested in watching what I am going to do" (Participant 28)

“I find you have to ask lots of questions.....it’s not structured in a way it’s automatically going to come to you, you’ve got to go out there and say I want to do this, what’s this?” (Participant 1)

It is clear that the reality of the actual role of a paramedic and that portrayed in the media can impact on the expectations of first year students.

“One of the things I’m learning about being a paramedic, it’s not just emergency medicine.....all you see on TV is the blue, big yellow van, the blue lights screaming at ninety miles an hour and in actual fact you’re going to Ethel who is on the floor and can’t get up” (Participant 3)

However, participants had some clarity around the need to explore non ambulance placement opportunities. They felt that the ability to ask “why”, “why did you do that”, “why do you do it like that” invaluable. They understood that the role of the paramedic is evolving and these placements enabled them to see where the paramedic role fits into the wider healthcare environment

“It’s about seeing an opportunity to get the skills..... to be transferrable to your own profession” (Participant 22)

Acquisition of technical skills was an area where learning “”the tricks of the trade” and developing basic observation skills were seen as confidence building.

“A paramedic is a jack of all trades.....you need a good knowledge of pretty much every department that you could get in a hospital to use that on the road” (Participant 4)

“It gave me additional knowledge and skills to put into pre-hospital practice” (Participant 5)

Participants in particular understood the benefits of learning from subject experts in specialist placements such as anaesthetics, midwifery and mental health

“Mental health again I think would be a good one because like on the ambulance you do deal with a lot of mental health and like you can probably learn a lot from mental health nurses and people who are working with a lot of mental health patients...more than you can learn about mental health on the road” (Participant 2)

4.2 Theme: The patient journey

The participants felt that non-ambulance placements enabled them to gain an insight into the patient journey. They felt that “getting the chance to stay with patients” and “getting the time to sit

with a patient" were valuable experiences. This "brings confidence to the ambulance role" with one participant stating "there is something to be learnt from every interaction".

All of the participants commented that they had gained knowledge and insight into how interventions and treatments they perform on the road impact future care.

"To see the spectrum of care…what happens when we take a patient to A+E……..most paramedics don't know……..we do understand now" (Participant 9)

"You not only get to see the actual event [*cardiac arrest*] but then you actually get to see the follow-up, so you get to see what happens [*to the patient*]
(Participant 4)

Fourteen participants stated "It gives an insight into what is going to happen when we handover". This appeared to be a strong learning opportunity and one that the students explained changed the way they dealt with their patients.

" You already know what happens on the ambulance……..healthcare doesn't stop at the door [of A&E]…….. and it [non-ambulance placements] helps us tell the patients what to expect".

(Participant 15)

4.3 Theme: Communication

Communication with patients for many first year student paramedics is a totally new experience. Twelve participants felt that non-ambulance placements supported them to develop communication skills with patients, family and other healthcare practitioners. They suggested that being made aware of different communication styles increased their confidence when communicating with patients.

"Teamwork and communication in healthcare is a really, really important thing for me to observe and I feel that, you know, I've learnt a lot from that……..I think communication with patients, talking to patients, getting the feeling of interacting with patients, with medical staff as well …it's a positive thing" (Participant 20)

"It gave me the chance to learn to talk to a sick person, learn how to talk to a scared person"

(Participant 3)

The participants felt that communication skills especially in relation to handover was an area in which non-ambulance placements facilitated learning

"It's the professionalism..... whenever you drop off your patient and pass on the information that you are going to get that quality.....its patient centred care and giving the best quality care you can" (Participant 8)

"I was in the A+E department.....got involved in handovers.....I've been able to see both sides and how, erm, they can be different in a variety of settings. It's helped me more in communicating with other healthcare professionals and not just specifically patients" (Participant 10)

4.4 Theme: Mentorship

It became evident from the interviews that there is considerable work to be done around multi-disciplinary education and understanding of the mentorship role within the clinical environment. Paramedic students undertaking non-ambulance placements within a hospital setting is a relatively new phenomenon with some mentors unsure about the role of a paramedic. Students were being asked "what is the point of you being in a hospital?" They felt that this was due to a lack of professional understanding rather than discourtesy.

"When we have a nurse mentor a lot of them have said they don't really know what I should be doing and they don't really know what to do with me" (Participant 2)

"Obviously like you don't see a paramedic on a ward.....so it's just a case of them not really, you know, engaging with you as much as if you were like, you know, a student nurse" (Participant 11)

Sadly two students found this experience very negative

"Sometimes we're just not particularly welcomed to some areas that we go into as student paramedics and it sort of knocks your confidence quite a bit" (Participant 17)

"I'd never worked in a hospital before and I was thrown in at the deep end and maybe that did help a bit but that sort of knocked my confidence a bit" (Participant 29)

Following a very positive placement experience a student has the opposite experience in a second placement where "I didn't see my mentor, she wasn't interested" highlighting the inconsistency towards mentorship and student support. The participants identified that their ability to be proactive helped them to get the most out of the placement. They highlighted their practice portfolio as a way to explain their reason for being in the hospital environment and therefor improve their experience.

"You have to look for opportunities.....If they say we're going to a whatever, I said can I come and they always said yes.....The nursing staff ....they'll always answer your questions or they will find someone who knows" (Participant 1)

There were areas of excellent practice identified where students felt supported

“My mentor was really, really willing to teach me about heart conditions, treatment of heart conditions.....the management and then that helps me recognise on the road.....so that really helped me” (Participant 7)

“Literally the minute anyone found out I had any competency to do that was it, I was taken under somebody’s wing, they just sort of kidnapped me and going all over the place” (Participant 4)

“My mentor was fantastic...pushing me off to go see different people, talk to different people, this is going on, that’s going on.....but you’ve got to be proactive, you’ve got to adapt especially as a paramedic, you’ve got to adapt to a situation and make it work for you as best you can (Participant 3)

5. Discussion

The Health and Care Professions Council (HCPC) Standards of Proficiency require paramedics to be knowledgeable about numerous pathologies and clinical presentations (HCPC 2014) acknowledging that the paramedic role has changed substantially over the last decade with an increasing focus on admission prevention and treatment at home (DoH, 2005). This suggests that such a breadth and depth of knowledge will require learning experiences outside of the traditional ambulance setting where exposure cannot be guaranteed. The use of alternative placement experiences including hospital wards, walk in centres, GP surgeries and mental health units can increase exposure to focused and specialised learning opportunities (CoP, 2017). Student paramedics interviewed for this study appear to have a thirst for knowledge and an acknowledgement that the breadth and depth of this knowledge cannot always be met in the pre-hospital environment. They are developing skills and knowledge in learning environments where they did not traditionally belong.

With the proliferation of new health care roles over the last five years, clinicians are confused and unsure about their responsibilities when mentoring different groups of students despite the recognition that such training supports effective communication, problem solving, decision making and teamwork (Reeves et al. 2013). It is evident that despite health professionals acknowledging that they work as part of a Multidisciplinary Team (MDT), members see themselves as advocates of their own discipline and this fosters rivalry between professional groups. Collaboration between health professions is essential to meet the increasing complexity of our patients. The provision of non-ambulance placements for paramedic students appears to be a logical step in improving teamwork and thus patient outcomes (Reeves et al. 2013). However, Roodbol et al (2010) suggests that social identity and acceptance can be barriers to such collaboration. Attitudes need to shift to see the student as a healthcare student as well as a student paramedic or a student nurse. Whilst professional identity is important it can also create silo working (Mishoe et al. 2018).

In 1999, the theorist Etienee Wenger suggested that “Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger, 1999). She suggests that learning is central to identity and for there to be a community of practice there needs to be a domain, a community and a practice. If we relate these concepts to paramedicine the domain is pre-hospital medicine. Paramedics often have membership of the College of Paramedics suggesting a commitment to this domain. The community refers to the members of the domain, how they interact, support, teach and learn from one another. Paramedic students are part of this community, learning with and from other paramedics. Finally a

practice refers to the resources that the community uses and which are often informal. This may include stories, anecdotes, and “tricks of the trade” as described by one of the participants. Communities of practice develop through problem solving, information sharing, telling of experiences and identifying and sharing knowledge. All this could be true of the paramedic profession. However, through exposure to non-traditional learning environments the principles of a community of practice are too simplistic and therefor being challenged. The domain shifts to healthcare, the community to healthcare practitioners and the practice encompasses learning opportunities from a variety of clinical specialities. In essence the community of practice becomes the multi-disciplinary team. Future research could explore how, as educators, we can support a MDT community of practice and if this can reduce rivalry between professions, promote effective mentorship and ultimately improve patient care.

6. Conclusion

This study gives voice to first year student paramedics starting their educational and professional career journey. Whilst the students identified some excellent learning opportunities within the non-ambulance setting they felt unsupported at times with evidence of professional isolation and lack of support. As individuals many of them accepted that they had a responsibility to actively seek out learning opportunities but also felt that their clinical mentors had a lack of insight into the need for non-ambulance placements. In order to prepare our students for the future, to deliver quality care and to improve patient outcomes, a variety of learning placement opportunities is crucial. There remains work to be done supporting clinical mentors, tearing down barriers between professional groups and exploring our similarities and strengths.

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References

Allied Health Solutions (2013) *Paramedic evidence-based education project: end of study report*. Hadlow: Allied Health Solutions.

Association of Ambulance Chief Executives (2011) *Taking healthcare to the patient 2: a review of six years’ progress and recommendations for the future*. London: Association of Ambulance Chief Executives.

College of Paramedics (2017) *Paramedic curriculum guidance*, 4th edition. Bridgwater: College of Paramedics.

Department of Health (2005) *Taking healthcare to the patient: transforming NHS ambulance services*. London: Department of Health.

Delisle, B. & Ebbs, P. (2018) Student paramedic views of an international clinical and cultural learning experience. *Journal of Paramedic Practice*, 10(8), 342-347.

Health & Care Profession Council (2018) *HCPC decision on threshold level of qualification for paramedics*. Available online: [Accessed 06/06/2018].

Health & Care Professions Council (2017) *Standards of education and training*. London: Health & Care Professions Council.

Health & Care Professions Council (2014) *Paramedics standards of proficiency*. London: Health & Care Professions Council.

Jones, p. & McGillis, W. (2013) International learning: bridging the gap through exchange programmes. *International Paramedic Practice*, 3(2), 53-55.

Lucas, P. V., McCall, M. J., Eccleston, C., Lea, E., Stratton, B., Annear, M., Crisp, E., Elliot, K. E. & Robinson, A. (2014) Prioritising the development of paramedic students' interpersonal skills. *Journal of Paramedic Practice*, 7)5), 242-248.

Miles and Hubermann (1994) *Qualitative Data Analysis.* 2 edn. Thousand Oaks, California: Sage Publications.

Mishoe S, Adams Tufts K, Diggs LA, Blando J, Claiborne D, Hoch J, Walker M (2018) Health Professions Students' Attitudes Toward Teamwork Before and After an Interprofessional Education Co-Curricular Experience *Journal of Research in Interprofessional Practice and Education* Vol. 8.1

National Audit Office (2011) *Transforming NHS ambulance services*. London: National Audit Office & Department of Health.

National Confidential Enquiry into Patient Outcome & Death (2007) *Trauma: who cares?* London: National Confidential Enquiry into Patient Outcome & Death.

NHS England (2013) *Transforming urgent & emergency services in England – urgent & emergency care review of end of phase 1 report*. Leeds: NHS England

Reeves, S., Perrier, L., Goldman, J., Freeth, D., & Zwarenstein, M. (2013) Interprofessional education: Effects on professional practice and healthcare outcomes (update). The Cochrane Database of Systematic Reviews: CD002213

Roodbol PF. Multiprofessional education to stimulate collaboration: a circular argument and its consequences. Netherlands Journal of Medical Education 2010;29(1):61–65)

Ruston, A. & Tavabie, A. (2011) An evaluation of a training placement in general practice for paramedic practitioner students: improving patient-centred care through greater inter-professional understanding and supporting the development of autonomous practitioners. *Quality in Primary Care*, 19, 167-173.

Smith, G. (2015) Internationalising paramedic education through clinical placement experiences. *Australasia Journal of Paramedicine*, 12(2), 1-3.

Wenger, E. (1999) *Communities of Practice: Learning, Meaning and Identity* Cambridge University Press. London

Xiang-Yu, H., Rego, J. & Service, M. (2013) Review article: paramedic education opportunities and challenges in Australia. *Emergency Medicine Australasia*, 25, 114-119.