Research

Enhancing professional practice and professionalism among Canadian rural paramedics

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Abstract

Introduction
The scope of paramedic practice is being redefined and expanded. Professional development and clinical expertise are not only necessary for paramedics to perform their clinical functions and operational responsibilities, they are at the very core of their professionalisation. Professionalisation is a complex process, and the degree to which it can be accomplished will impact society's perception of the profession – and its trust in it – for years to come. This study investigated ways to enhance professional practice, from the point of view of the main healthcare providers in a rural area of Ontario, Canada.

Methods
A qualitative analysis informed by action research methodology was used. The research design was staged and consisted of focus groups and a World Café. The data were coded and organised into themes, using thematic analysis, and were triangulated with the literature.

Results
Three key themes emerged from the World Café and focus group conversations including current enablers of professionalisation; system components that promote professionalism; and community of practice to support professional development and clinical expertise.

Conclusion
Paramedic practice is evolving. This should be reflected in clinical practice and education, and more paramedic-led research. Paramedic training may need to move from the college to the university environment to reflect equal standing with colleagues in the broader healthcare system. This study shows strong motivation among paramedics and management to enhance professional practice and professionalism. To achieve this, a culture of trust, developing engagement and communication strategies and establishing a community of practice are crucial.

Keywords:
paramedics; emergency medical services; professionalism

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Introduction

The scope of paramedic practice is being redefined and expanded. Paramedic services are widely recognised as community-based access points to the healthcare system and an extension of primary care into the home environment. Paramedics are valued and recognised members of interdisciplinary health teams, as demonstrated through fully integrated and mature partnerships with primary care teams, hospitals, home and community care providers, palliative care teams, rural health hubs, and mental health and addiction service agencies (1).

As part of their practice, paramedics provide expert assessment, diagnosis, treatment, system navigation and care coordination day and night. They work under dynamic conditions with little supervision, where the full range of paramedic procedures is not applied consistently. Given the rapid advancements in the medical field, it is crucial that paramedics keep abreast of current and relevant knowledge and skills and that they maintain a certain level of proficiency in order to deliver concurrent patient care (2); this is especially true considering their expanded scope of practice. Therefore, professional development and clinical expertise are not only necessary for paramedics to perform their clinical functions and operational responsibilities, they are at the very core of their professionalisation.

Professional practice, in its purest sense, means that professionals are constantly assessing their competencies with respect to the technical and non-technical services they provide. When organisations put structures and processes in place to promote professional practice, several benefits ensue. While the most obvious advantage is better quality of care for patients, employees also benefit through higher levels of engagement and more effective interactions with colleagues and stakeholders (3,4). The net result is an enhanced continuum of care, for the population, from the whole chain of safety and health services (5).

Over time, the paramedic profession has evolved to reach a point where it is set to become a self-regulated profession. Professionalisation is a complex process, and the degree to which it can be accomplished will impact society's perception of the profession – and its trust in it – for years to come. To assist in this process, this research investigates the best ways to enhance professional practice, from the point of view of the main stakeholders in a rural area of Ontario, Canada. The main stakeholders included other healthcare professionals that would support the patient care plan, such as primary care physicians, emergency physicians, nurse practitioners and pharmacists. The following research questions are addressed:

1) What are the conditions that support professional practice among paramedics?
2) What system components would promote the professionalisation of paramedicine?

Methods

Study design
A qualitative analysis informed by action research methodology (6) was used to explore the conditions that support professionalisation. The research design was a sequential priority qualitative design, sequenced as 'qual > qual > QUAL' (7) and included two qualitative data collection methods consisting of two focus groups and a subsequent large group intervention based on the World Café methodology. The World Café is a method that stimulates innovative thinking through dialogue. It was used here to articulate the features of professional practice and to build community-based collaboration and commitment for the professionalisation initiative (8). The study was based on a staged approach, first gathering perspectives from the organisational side of paramedicine, and then involving paramedics to discuss and provide further perspectives on maintaining and improving professionalism.

Participant recruitment
An inquiry project team – comprised of the primary researcher (MG), an external consultant, four members of the County of Renfrew Training and Development Group and an administrative assistant – was created to facilitate focus groups and a World Café. As the researcher MG plays the dual role of supervisor and teacher within the County of Renfrew Paramedic Service, steps were taken so that a neutral party oversaw the process and approached potential participants to ensure they felt at ease and were able to speak freely during the World Café. The service's senior leader was excluded from the focus groups and the World Café to avoid any perception of undue influence or coercion, as he has the authority to implement any recommendations.

A purposive sampling selection process was used to recruit participants. Inclusion criteria included paramedics who are licenced to practise in Ontario. Participants were provided with an information sheet and a letter of consent that confirmed their intention to participate once signed.

Setting
The paramedic service is located in Renfrew County in rural Ontario, Canada, with a population of ~102,394 people (which expands to more than 120,000 during the summer) and a catchment area of ~7400 km2 (9).The area's large rural population dispersed over a vast geography impacts service delivery, as does its ageing population – given that the frequency of ambulance use increases as people age, and by as much as 40% between 60 and 70 years (10).

Focus group data collection
Two focus groups were held to discuss the organisational view of paramedicine's professionalisation. The first focus group was conducted with deputy chiefs, all with service quality portfolios, and included 15 participants. The resulting data were organised into themes that were carried forward into the second focus group, which was conducted with paramedic commanders,

six in total, all management team members. Discussions were structured around questions that were vetted by the inquiry team (Table 1). Both focus groups lasted up to 120 minutes and were audio-recorded for transcription and analysis.

Table 1. Focus group questions

Focus group questions
• What are paramedics' perceptions/beliefs/opinions of professional practice, professional development and providing consistent quality care?
• What makes a professional paramedic?
• What barriers prevent peer-to-peer paramedic accountability?
• How can paramedics self-manage their professional development?
• What systemic change(s) could we do to make it happen?

World Café
The results of the two focus groups were used to inform a World Café conversation. As part of this exercise, 25 paramedics, whose work experience ranged from 2 to 35 years, engaged in a collaborative dialogue around two broad objectives/ topics: stimulating innovative thinking to articulate the features of professional practice, and building community-based collaboration and commitment for a professionalisation initiative (Table 2).

Several tables were set up, equipped with an audio-recorder, paper and pens. Participants were divided into small groups and seated at different tables. At each table, a specific topic was discussed and the conversation was facilitated by a member of the inquiry team. Following a 12-minute discussion, all groups would take a 10-minute break and then move on to another table where they would engage in a second round of discussions. This rotation between tables allowed for a cross-pollination of insights, as at each table participants read summaries of what had been discussed by the previous group and contributed their views to the conservation (8). Once all participants had engaged at each table, the facilitator gathered the information provided and summarised it on a white board. This was used to inform a large group discussion, after which participants were asked to review and validate the information. The World Café lasted 5 hours in total.

Analysis
The audio-recordings of the focus groups were transcribed verbatim. The data were coded and organised into themes, using thematic analysis (11), and were triangulated with the literature. The inquiry team and primary researcher assessed whether the 'voices' of all participants were heard at the World Café. The notes gathered in the World Café were used as secondary data. COREQ standard guidelines were used for the reporting of results (12).

Table 2. World Café questions

World Café questions
In order for paramedics to provide a consistent level of quality care they need to adopt a professional responsibility related to their patients, their own competence and to the effective operation of their service. For this state to be realised what type of organisational support will be necessary?
For paramedics to become self-regulated healthcare professionals and be accountable to the community, it is important to have self-motivation to stay current and to have a professional relationship with the County of Renfrew that supports that intrinsic motivation. What does this mean to individual paramedics and what does such a state look like?
In order to be truly professional, paramedics need to encourage feedback on their performance. Many professional groups have peer-to-peer feedback mechanisms. For this to work there must be organisational trust between managers and paramedics such that there is no fear (real or perceived) of arbitrary punishment, and no bias based on gender, generational differences or social background. How can the County of Renfrew achieve this culture of trust? What needs to be done immediately and over the long-term?
In a system where paramedics identify, manage and maintain their own professional competence and development, what types of organisational support would be necessary to sustain this environment? What would such a self-identified, and self-driven professional development system look like – be specific and give concrete examples?
In order to raise the overall level of professional practice (both clinical and managerial) in the County of Renfrew there must exist an environment of collaboration and transparent communication. In this environment there must be opportunities for engagement in all aspects of the operation as part of the professional's development. What would this look like? eg. peer-to-peer sharing or mentoring, etc. How could it be achieved? What currently exists? What's missing?

Ethics

Ethical approval for the study was granted by Royal Roads University Research Ethics Board (RRU REB).

Results

Three key themes emerged from the World Café and focus group conversations: current enablers of professionalisation; system components that promote professionalism; and community of practice to support professional development and clinical expertise. These are discussed below, along with a number of sub-themes.

Current enablers of professionalisation
Peer support, relevant continuing education and community attachment were identified as key driving factors for professional development.

Peer support

The culture within the paramedical profession is largely based on paramedics helping each other grow and become professionals. Types of peer support range from pairing students with a preceptor in a college program, to routinely working in pairs after graduation, to taking on the role of a preceptor.

> "If you talk to a preceptor car or people who typically take students, it's a regular means of communications. They are constantly self-evaluating; they are constantly reviewing. It's very difference than in a car that rarely takes students." (Focus group 1)

Participants felt that as the profession evolves, community colleges should take on a greater degree of responsibility in the training of future paramedics in clinical competency and professionalism. Furthermore, paramedic training may need to move from the college to the university environment to reflect equal standing with colleagues in the broader healthcare system. Participants emphasised how current training is overly focussed on life-threatening incidents at the expense of many other aspects that are part of the paramedic's daily work.

> "We spend 90% of our time training for 10% of the calls and maybe there needs to be lengthening to the program to bring up that level of professionalism, where now we do everything from social work to psychology to emergency patient care." (Focus group 1)

Knowledge transfer among peers via mentoring also promotes both professional development and clinical practice, as evidenced when knowledge is shared between advanced care paramedics and primary care paramedics. Indeed, when these two groups work together, they have the opportunity to gain skills, knowledge and self-confidence.

> "When a primary care paramedic (PCP) works with an advanced care paramedic (ACP) consistently, realising the level of obligations that an ACP has, that they really learn a lot being with that ACP on the more in-depth patient assessment of looking for differential diagnosis." (Focus group 2)

Participants believed that peer pressure is one of the most effective ways to promote professional standards. When someone is asked by a peer to conduct themselves properly, this has a greater impact than when the request comes from a supervisor. Participants explained that paramedicine is a competitive environment, and most paramedics are keen on comparing their levels of performance and knowledge with those of their colleagues.

> "I think that we need to stop being so competitive and start collaborating together and ensuring that we help each other with their weaknesses." (World Café)

Consistency in education

The standards set by the Ministry of Health and Long-Term Care (MOHLTC) were seen as limiting paramedics' professional growth and clinical acumen. Currently, professional standards are defined and regulated by the MOHLTC and by regional base hospitals, and these standards are almost exclusively technical, which could result in paramedics becoming technicians.

> "In Ontario, the profession has been kind of, I like to refer to it, as being under the thumb of the Ministry." (Focus group 1)

Reference standards do not reflect research-based practice. A dynamic document, developed by paramedics, should be used instead. Participants argued that for paramedics to be respected by other healthcare professionals, ownership of their own practice standards is essential.

> "The system has kind of evolved to such a way that paramedics don't have any personal responsibility for it and that is kind of the way the Ministry likes it right now." (Focus group 1)

The widening of paramedicine's scope of practice was not followed by an increase in time and money provided for professional development. Because of the speed at which the practice is evolving, pressure is put on paramedics – who are already dealing with time constraints – to acquire their new skills during their biannual continual medical education program.

> "If the organisation wants proficient paramedics that use clinical judgement and provide the best service to the community, adequate funding needs to be put toward professional development." (World Café)

> "Over the course of the last 10 years, the scope has increased dramatically, but the time that has been provided for education has not." (Focus group 1)

> "CMEs [continuous medical education], it's a learning environment so what can we learn from that mistake for the next time. It's reflective it's not so much as you did this wrong; it's how could you have done this better? They carry this forward to the next situation This is what happened the last time, and this is how I'm going to do it differently." (Focus group 2)

Participants felt that the punitive approach used by the MOHLTC led to a culture marked by fear of reprisal. External policing of their practice encourages paramedics to hide their weaknesses, making it harder to foster professional development and clinical expertise.

Community attachment

Participants saw community attachment as an enabler for professional development. Serving the community and

having a positive impact on its population can contribute to job satisfaction and help develop an intrinsic motivation to become a better professional. Paramedic services can create special teams – such as a remote access team, a community paramedic program or a bike team – that lead to stronger group cohesiveness among employees and to a greater sense of belonging to the community they serve.

"It's the ability to do something, be professional at it, and at the end, have a sense of satisfaction, and by having these little differential tools that we do for the patients in Renfrew County, it really brings that forward because you've got different groups who are involved in different things, whether it's the contamination Ebola one, RATT, community paramedicine." (Focus group 2)

"These teams give us the ability to change the day-to-day role and to decrease compliancy and increase job satisfaction." (World Café)

"I think we need to educate the public of our capability; I think we are making huge progress with the Community Care Paramedic Program, but I still believe that we are viewed as a golden ticket to a wheelchair." (World Café)

System components that promote professionalism
Key system components identified for enhancing professionalism include the creation of a collaborative learning organisation, increased focus on staff engagement and interprofessional relations.

Learning organisation
Creating a learning organisation can help foster professionalism. Participants stated that they would like to see a shift from the 'us versus them' culture, to a collaborative working environment where personal and professional growth are values and priorities shared by supervisors and employees. They stressed the need for learning to take place in a supportive environment so that they can build trust with their supervisors, while also reflecting on their own motivators. The goal would be to build effective relationships and support each other so they can aspire to, and achieve, higher levels of professionalism.

"I think that a part of some success is when a paramedic self-identifies that they have a passion for a certain aspect of our business that we do have a responsibility to try to support that initiative." (Focus group 1)

"Paramedic intrinsic values and then it ultimately spins off into patient outcomes because it always seems to be a connection to what you are doing from a day-to-day perspective, and there is a lot of satisfaction from a paramedic perspective when you are empowering when you are giving them the ability to control what they are doing from a day-to-day perspective." (Focus group 1)

Staff engagement strategies
Staff engagement was another system component identified as instrumental in promoting professional development. Participants mentioned the need for better recognition and rewarding of positive behaviour, adding that a more direct relationship between management and employees would increase trust levels within the organisation. They also indicated that constructive support and transparency in management's feedback and actions are crucial in maintaining trust. Positive coaching was preferred over receiving negative feedback after the fact.

"How can we support you, look for the feedback to allow you self-improvement and professionalism in a sense 'what is it that you are looking to advance', and there were obvious things… What are the major problems or major stumbling blocks for you to advance or to improve?" (Focus group 2)

Participants would like their organisation to identify 'influencers', or employees who are viewed as role models by their peers and who demonstrate professional behaviour and model high professional standards.

"I think that kind of culture or stance or vision of the service needs to be projected so that you are attracting the people that you want to further develop the service that you are involved with. I think you have to walk the talk and project what you want for the service and be able to bring in the best people possible". (Focus group 1)

It was recommended that the organisation create positive incentives and merit-based opportunities for strong employees. For those who want to advance in the organisation, this would provide motivation to stay current and demonstrate commitment to self-development.

"I would like to see more opportunities created for the individuals who currently aren't getting opportunities because they are not at the top of the seniority list or they are not a full-time employee, and granted that the people that do qualify, they are best for the job." (Focus group 1)

While acknowledging that change will not happen overnight, participants highlighted the importance of working towards a culture of trust to improve employees' engagement and job satisfaction. This would help gradually increase professional development.

"So that [professional practice] will come from trust, and it takes time, and [encouragement] over and over again, they see that coming forward and advocating for the patient and there is no reprisal, but there is education and support and whatever the case may be, then they will start to come forward more, but it takes time." (Focus group 1)

Interprofessional relationships

Participants believed that the future of the profession depends on our ability to create multiple pathways to provide the right treatment and choose the right destination for the patient, from the very start. For this to happen, allied agencies need to respect and trust the quality of care that paramedics provide as well as their decision-making process, and they must ultimately recognise paramedics as members of the healthcare system and not just a public utility.

"There is a huge lack of understanding from a generalised system perspective that is really required for us to do a really good job, and I do think it contributes to the professionalism that you would require." (Focus group 1)

Strong collaboration with other health agencies could also help promote professional development within the profession. Ongoing communication between paramedics and other healthcare professionals is the best way to enhance relationships and develop trust. An example of a positive relationship builder would be for paramedics to receive feedback from physicians regarding care they provided. This could lead to self-reflection and help develop clinical expertise.

"Integrated into a healthcare team or family health team or community health centre or a health link initiative is where professionalism needs to go because it allows you an opportunity to be doing your scope and your responsibility in a different environment that had never been thought of." (Focus group 1)

Community of practice to support professional development and clinical expertise

A community of practice was seen as an important support structure for paramedics to develop professional practices. Participants felt that such a community would be beneficial in several ways, including acknowledging vulnerabilities, encouraging people to lead by example, establishing peer norms, helping paramedics become independent professionals, promoting self-reflection and self-awareness, and guiding practice through evidence-based research.

Acknowledging vulnerabilities

Working in an environment that allows them to build trust and relationships with their peers would allow paramedics to take the time to reflect on their practice, self-report and be self-aware, and would also allow them to feel comfortable being open with their colleagues. Participants thought that the current culture within the profession prevents paramedics from exposing their vulnerabilities for fear of reprisal. Building trust in the workplace and changing the culture are essential for paramedics to be at ease with sharing their experiences, offering mutual support and promoting peer-to-peer education.

"I don't want to tell on my co-worker because they will get fired or they will get in trouble. Again, building that trust

to say we are not looking to fire or discipline somebody, we are looking to assist them maybe correct behaviours or change behaviours, however you want to look at it." (Focus group 1)

"I think that one barrier would be just the simple fact of embarrassment/vulnerability. They don't want to stick their neck out there to show weakness, but it's because they think it's a weakness not like they say, 'I stuck it out there so that nobody else does it'. They think, 'Well if I say I screwed up, and then everybody is looking at me'." (Focus group 2)

Leading by example

Participants believed that for paramedics to be perceived as professionals they must always act professionally to earn the respect of the public and of other health professionals. Professional development should include a focus on professional ethics, attitudes and values. Managers can play a key influential role in this respect, and they should lead by example and promote high professional standards in the organisation.

"We need to determine what our place is in society is it to drive people around in a truck or do we have a larger responsibility, for example to educate the public and offer the resources to help them." (World Café)

Establishing peer norms

The establishment of peer norms and standards was seen as a key practice to make paramedics accountable to the community and spur them to continually improve the quality of care they provide. This would reduce complacency among paramedics, as they would be encouraged to maintain expected knowledge, skills, behaviours and attitudes.

"What we want is to have better medics, better people that can hold themselves well. They are more respected in the public as a group, and it's easy when you have a bunch of people who are working as a family to say, 'You know what, you need help'." (Focus group 1)

"But if we can build ourselves as a professional that we aren't always the 'UBER' to take you to the hospital and dump you and move on, but that we would be able to, as a professional, go, 'Here's what you really need'." (Focus group 2)

Becoming independent professionals

Participants believed that the organisation should offer incentives to motivate paramedics to exceed the current minimum standard and increase performance. Currently, standards are so low that it creates a certain level of complacency among paramedics. To provide adequate care to the community and be respected by other healthcare professionals, paramedics need to maintain their skill levels, increase their proficiency and strive for mastery.

"To be a professional, have good ethics, be committed, this is something we have to instil in them, and I don't believe it should be a punitive approach. I think it should be a group approach, where we can sit down and discuss as a service or even as a bigger as a profession." (Focus group 1)

If the organisation engages employees in the development and pursuit of its goals, this will foster engagement and professional development among paramedics. The organisation has to ensure that its policies align with its strategic direction and subsequent performance expectations. This can set paramedics on a path for success and motivate them to provide the best care possible to the community they serve, while helping further their professional development towards clinical expertise.

"People just aren't aware that this is the standard. So if you want to promote professionalism, we have to tell them: 'This is how you look at yourself to pick out what you are weak at. This is how you should handle yourself'." (Focus group 2)

"That's part of being professional though. It's not doing something because the regulations and the rules say this. I did it because of this and this and this, and it's all in the best interest of my patient, and oh look! Those rules and regulations actually support what I did." (Focus group 2)

Promoting self-reflection and self-awareness
Paramedics should take time to reflect on their own performance and share their insights with their colleagues, as this would promote personal and professional development. Participants identified several ways for the organisation to support paramedics and help facilitate self-reflection, such as keeping a learning journal, anonymous self-reporting and conducting grand rounds. However, for paramedics to be able to come forward in this way, the organisation and staff need to build an environment where they can be forthright, share their experiences and learn from colleagues.

"You sit in a room and do your grand rounds and everybody learns from it, and then you walk out as a better person because eight other people aren't going to screw up the same thing you did." (Focus group 2)

"But again, it changes, it's you telling that person or you doing it versus them saying self-recognition, and I agree. I think initially we are going to have to do a little bit of that and get the culture to the point that they do it themselves." (Focus group 2)

Guiding practice through research
Participants also identified the need for an evidence-based practice driven by paramedic-led research. To effect change within the profession it is essential to be proactive and stay up to date with new standards by reading and conducting pre-hospital

research. Also, for paramedics to conduct their own research, organisations must provide them with adequate research training to ensure proper methods are used during data collection, analysis and interpretation. Otherwise, their research will have no credibility or impact on the healthcare system.

"Part of being professional though is being informed, and I don't think we inform people enough about the decisions that we make – just like if you withheld oxygen on a patient." (Focus group 2)

Discussion

In this study we investigated how the professionalisation of paramedicine can be furthered. Findings indicate that there is a strong desire to enhance professional practice and professionalism. Several factors were identified that may promote professionalism, and they can be combined through a systematic approach based on four elements: fostering a culture of trust; developing an engagement strategy; developing a communication strategy; and establishing a community of practice.

Fostering a culture of trust
Paramedicine's role and scope are changing, and its structure needs to evolve accordingly. Paramedicine needs to move away from a paramilitary structure and advance towards a learning organisation. Understanding the organisation's root values may help create micro-culture changes and give momentum to affect change (13). The results show that it is important to consider how the system can improve and be conducive to an environment where paramedics feel safe to learn and practise. This also requires a strong occupational identity (14). Paramedics are still afraid of making or acknowledging mistakes for fear of reprisal, and this prevents the profession from moving forward. A culture shift would lead to an environment of trust where paramedics are encouraged to learn from their mistakes, thus contributing to their professional development (15). Reflective practice is possible in an environment where employees – individually and collectively – are constantly learning how to learn (16). In order to create a learning organisation where it is safe to learn and practise, a culture change would be essential.

Developing an engagement strategy
Paramedicine organisations need to create a work environment that challenges employees and gives them opportunities to grow. Such an environment would allow employees to be proactive in enhancing their skills, knowledge, behaviours and values related to professional competency and proficiency. In addition, to deliver and maintain results, having the right people in the right place is crucial (17). The results suggest that identifying champions (ie. colleagues who are experts in a specific field and on whom employees can rely) may help organisations increase engagement and job satisfaction.

Developing a communication strategy
Through effective communication strong relationships can be

built between employees and stakeholders and this, in turn, can help promote professional development and professional practice. Recognising positive behaviours and providing feedback will enhance professional development. It is important that organisations celebrate small wins, as this allows them to track their progress while advancing towards clinical expertise. Learning must also be monitored to keep track of progress made, and this can be done by assessing results and determining if goals were achieved (18). Organisations need to foster a feeling of shared identity, as this will create an environment of trust where strong and respectful relationships can be built (19). In addition, clear expectations regarding goals and a common vision must be communicated to employees, so everybody is moving in the same direction.

Establishing a community of practice

The results underscored the importance of establishing a community of practice – a collaborative learning environment where paramedics work together towards clinical expertise. Communities of practice extend beyond internal organisations and include strong relationships with other healthcare professionals. Oshry explains that parties who enter into a partnership are jointly committed to achieving success, which comes back to strong collaboration between paramedics and to meaningful support from their peers involved in the professional development process (20). Evetts believes that for paramedicine to evolve as a profession, it should require a certain standard for entry, that is, a requisite level of education and knowledge to practise (14). This is echoed in the results. Once standards are in place, the community of practice can set basic guidelines for paramedics to perform at the required level.

Strengths and limitations

A limitation of this study is that most of the information was collected through purposive sampling in a single rural Canadian service. A further limitation to this qualitative research is the large cohort of paramedics who did not volunteer to participate to the World Café but may have contradictory or various other valuable ideas to share. The results cannot be generalised beyond the specifics of the study and may not represent the perspectives of other paramedic services. Risks as a topic was not addressed in this study and should be considered in future research to provide more information to the topic. Further research would be needed to verify the study's findings.

Participants included only those working in paramedic services, and excluded external stakeholders. For future research it would be important to widen the sample to include stakeholders who have political, financial, administrative or clinical relationships with paramedics and their work, and to investigate how these stakeholders see the evolution of the paramedic professional practice.

A strength of the study is that the participants' data was gathered anonymously, which allowed them to speak freely. All the participants volunteered to take part and were included in the sample.

Conclusion

Paramedic practice is evolving, and this should be reflected in clinical practice and education, and it should come with more paramedic-led research. Paramedic training may need to move from the college to the university environment to reflect equal standing with colleagues in the broader healthcare system. Paramedics in Ontario, Canada are working towards becoming a self-regulated profession, and this study shows strong motivation among paramedics and management to enhance professional practice and professionalism. To achieve this, an approach should be adopted that focusses on fostering a culture of trust, developing engagement and communication strategies, and establishing a community of practice.

Acknowledgement

Competing interests

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

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