

Degrees of change: opportunities and obstacles for paramedic degree education.

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Introduction

The development of degrees for paramedics in jurisdictions such as Australia, New Zealand, South Africa, and the United Kingdom were in direct response to developments within the paramedic profession, including emerging roles, increasing paramedic scope and increased demands on paramedics as healthcare professionals.(1) Yet, similar to the challenges that faced the nursing profession as it entered academia, paramedicine also appears to need to justify its case for entry into higher education. Paramedic practice is in general, seen as a practical occupation, perhaps “*unworthy of academic study*”.(2) As paramedicine in North America begins the discourse regarding transition to degree level entry-to-practice education, the discussion appears polarised and underpinned by agendas that range from supportive, or ambivalent, to resistant to higher education for paramedics.(3,4) We believe it is timely to consider some of the opportunities such a transition may afford, as well as highlight some of the issues that may need to be considered.

To begin, it should be noted that across many Western countries where paramedics are employed and recognised as a healthcare profession there are multiple degree options. These include 3 or 4-year entry-to-practice, 3 or 4 year applied degrees (which combine the academic focus of a university degree with the practical skills students learn in college), 1 year Honours top-up programs for degree holders, 2 year top-up programs for Diploma/Foundation degree holders, and 4 year book-end options (whereby a 2 year paramedic diploma is completed during a 4 year degree time frame) to name a few. Therefore, when we say degree, we are broadly referring to any and all of the above that result in a paramedic attaining a baccalaureate degree in paramedicine (we appreciate that this nomenclature varies). We are specifically focused on paramedicine degrees, and not degrees in other majors or in general science. This is not intended to be framed as a discussion about whether degrees have value, but rather what types of knowledge, skills and behavioural attributes paramedics may need in order to address the health and social care needs of the

populations they serve, and how a baccalaureate degree may be a suitable vehicle for such education.

Opportunities

Paramedic practice has become increasingly diverse with current and future paramedics expected to possess a high level of technical skills, clinical acumen, leadership, situational awareness, and the ability to interact with progressively complex networks of interdisciplinary and interprofessional healthcare systems with technologies that are constantly evolving.(3) Critical thinking is also deemed a graduate level outcome, and in order to develop the critical thinkers needed to progress paramedic education to meet the needs of society, we need to produce graduates with this skill. Degree-level paramedic education provides graduates with capabilities that move beyond the traditional emergency response competencies.(5)

This traditional focus on emergency response and resuscitation, has often come at the expense of education related to core elements of practice, including patient safety, chronic condition management, care of the elderly or health promotion. Further advances in paramedic education programs as they transition to degree-level could respond to population change and health care system needs.(1) For example, education regarding social determinants of health is sparse in many curricula. Factors including income, education, ethnicity, Aboriginal status, geographic region, gender, and food security all shape the health of individuals and communities.(6) Given the growing recognition that such factors shape individuals' health outcomes (7,8), it seems prudent that this should form foundational knowledge within paramedic degree programs.

Several studies have demonstrated concerning trends regarding empathy levels among paramedic students, in particular towards certain vulnerable populations.(9,10) In addition, paramedics often report a lack of education regarding patient advocacy, and a hesitancy to do so due to cultural and organisational reasons. The move to degree level education offers opportunities for increased focus on interpersonal communication, empathy, and the patient advocacy role of paramedics. Patient safety within the prehospital setting is also poorly researched.(11) The nature of paramedic practice is unique, and can prove challenging when it comes to translating hospital-based patient safety findings and approaches.(12) Not only would a move to degree level provide scope for patient safety education, existing evidence within nursing suggests that degree-educated nurses are associated with reduced mortality, shorter length of stay and reduced incidence of complications.(13–15) Would we find similar results with degree-educated paramedics? This is not to suggest that paramedics without degrees would be less capable, caring, knowledgeable or committed - far from it. Rather it would likely be reflective of how and when graduate paramedics would seek and find evidence, and how they would pursue change in organisational culture to value education and research.

Practice also varies depending on regional context, and thus new opportunities will present to design educational content within degree programs that aligns to the needs of the region. Paramedic degree programs within a specified region should be similar (not necessarily the same), but have the overarching same graduate outcomes with similar operational and clinical placement profiles. Currently, even with regards to clinical placements alone there is significant variability evident.(16) Nationally and internationally, there are also opportunities to standardize core learning outcomes to enable paramedics to move across jurisdictions and internationally without the need to re-train. There is an obvious challenge here: graduates need to obtain a degree AND meet the regulatory requirements permitting practice as a paramedic. Clarification needs to be sought on whether or not graduates need to complete further examinations or if regulatory bodies will recognise graduates from degree programs without additional examinations.

These opportunities in education suggest that paramedics need to continue to further develop the paramedicine body of knowledge - which can only be achieved through paramedics leading research. Right now in Canada we lack the scientific means and infrastructure to make advances in many areas that require our attention.(17) Coupled with the '*academisation*' of paramedicine is the need to emphasise the importance and value of research.(17,18) Although we have all personally been involved with successful research ventures in vocational/diploma level education programs, the move to degree programs would provide opportunity to contribute more meaningfully to the questions we need to ask as a profession. Further opportunities for paramedics to pursue postgraduate degrees in paramedicine will naturally follow the transition to undergraduate degrees. We also must consider the need to develop the academics involved in paramedic degree programmes. A pressing challenge is the development and sustainability of a dedicated group of university paramedic academics and how we might entice paramedic clinicians into academia. There is a need to develop effective partnerships between paramedic services, professional groups, and universities to ensure sufficient numbers of paramedic academics are available to meet the educational demands of the profession.(19)

Obstacles

When the topic of degree-level education for paramedics is raised often one of the first concerns raised is related to the increased financial cost of undertaking degree-level education. While this is less of an issue in many European countries where education is heavily subsidised, and in Australia where generous student loan schemes exist, it is a legitimate concern elsewhere where the financial investment of undertaking education may not result in an acceptable return (such as pay or career development opportunities). If paramedics are expected to become a graduate profession, then this should be reflected in how they are treated as a graduate workforce. This is an area where both professional associations and unions need to advocate for the profession. Importantly, salary is not necessarily based on the level of education of the employee, but instead on the value they add to the system - hence why advancing paramedicine will broaden the range of services that paramedics can provide, positioning them to provide better care and contribute further value to the health system.

The increased duration of degree-level education is an additional cost that may present challenges to those considering paramedicine as a career option. Our position on this is straightforward - if you want to become a nurse, physician, physiotherapist or other allied health profession, you must commit the time required to complete their entry-to-practice education programs. Therefore, if you want to become a paramedic, then you must commit the time required to the entry-to-practice education program. “Shortcuts” to becoming a paramedic should not exist if the transition to degree education is made. This includes access for other healthcare professionals unless reciprocal arrangements are in place that acknowledge the unique knowledge and skill set of each discipline. Universities have a responsibility to develop innovative curricula that can offer blended learning opportunities where students can “earn while they learn” and complete portions of their program online or independently with opportunities for face-to-face learning, high-fidelity simulation, community engagement, and clinical preceptorship.

Some authors, including Caffrey et al. suggest that the entry practice degree requirements should only apply to new paramedics and that existing paramedics without a degree should not be required to gain one.⁽³⁾ Maybe so; however, we cannot expect to successfully support a graduate workforce when the preceptors, decision-makers and role models do not have a comparable education. The evolution of paramedic university education in Australia started by bridging senior ambulance service staff to degrees over several years, and subsequently offered degrees for paramedics to enter practice.⁽²⁰⁾ Equally, we also accept that not all paramedics want to engage in a university program, for whatever reason, and we respect that. Certainly, paramedics involved in the development of undergraduate paramedic students must have a similar or higher qualification, but perhaps paramedics who are not directly involved in the supervision or mentoring of graduates could have the option to abstain. Nonetheless, we believe that all paramedics should be supported and encouraged to obtain degrees and should be self-motivated to commit the time and effort to advance their clinical and professional practice. Nurses who have previously completed such “top-up” education increased their self-confidence, enhanced their clinical skills and perceived improved career prospects.⁽²¹⁾ Perhaps paramedics would realise similar benefits?

Links with paramedic services are essential in order to provide opportunities to develop and apply knowledge, skills and other attributes of practice (such as attitudes and behaviours).⁽¹⁾ Paramedic degree programs must include adequate experiential development and operational exposure with paramedic services. This will avoid university-centric perspectives on paramedic practice, and will give students the opportunity to experience paramedic practice. However, a lack of advancement opportunities upon qualification as a paramedic may present a challenge to a graduate workforce. If service models do not expand to include advanced practice, opportunities for specialisation, and support to undertake such development, then paramedic services may see graduates leave for other services, other countries that provide such pathways, or as we often witness, for other professions where they are afforded continued opportunities to develop.

Conclusion

Paramedicine is striving for the same professional footing as other healthcare professions. Given the increasing demands on paramedic services, and the expanding role of paramedics within health services, degree-level entry to practice appears to be logical. This move to higher education for paramedics presents many opportunities to improve and augment what we consider to be paramedic education. Standardisation of programmes, aligned to the requirements of regulatory bodies could streamline mobility and graduate licensing. There are however significant obstacles to this transition that should be given thoughtful consideration, which may require applied and/or theory-oriented research (17), before programs are designed or implemented. The transition to paramedic degree programmes also needs to be considered within the context of issues of equity of access, the needs and expectations of a graduate workforce, and subsequent development opportunities within the profession.

Disclaimer: The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any employer or organisation. All authors are currently or were previously involved in the development and delivery of paramedic degree programs at several institutions.

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