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PARAMEDICINE DEGREE DEVELOPMENT

By Duncan McConnell

There are many points of view out there right now about degree entry to practice for paramedics. So before we start to discuss the many different ways in which you can approach the development of a degree within paramedicine (bridging degrees, 2+2 degrees or even a straight bachelor degree), we should touch on few reasons as to why our profession needs to move towards degree entry to practice. By following a degree entry to practice pathway, led by paramedics, we will help ensure as a profession we establish the correct direction, future developments and the next level of evolutionary change our paramedic profession needs.

If we reflect back to the history and development of EMS, the Larrey Period during the late 1700s and early 1800s, is considered the birth of what is now modern EMS. Baron Dominick Jean Larrey, Napoleon's chief military physician, is considered the father of EMS in the modern era after developing seven key principles still in use today (PHTLS, 8th Ed). These were:

- The “flying” ambulance
- Proper training of medical personnel
- Move into the field during battle for patient care and retrieval
- Field control of haemorrhage
- Transport to the nearest hospital
- Provide care en route
- Develop frontline hospitals

Fast forward a hundred years into the mid 1950s and we have the Farrington Era. Here we begin to see

the champions of early modern EMS like Dr. Deke Farrington pushing boundaries to improve the quality of prehospital care and considered the father of EMS in North America. Then in the 1970s we see the first publication of a textbook dedicated to prehospital care called, “Emergency Care and Transportation of the Sick and Injured”. Fast forward again to the mid to late 1970s and the next major development in EMS education is the first dedicated paramedic textbook, written by Dr. Nancy Caroline, “Emergency Care in the Streets”, and the first real paramedic specific curriculum (PHTLS, 8th Ed). It is really from the mid 1970s and early 2000s that we also see significant growth and development of EMS and roles of paramedics around the world as well. Eighteen years ago Shaban et al., 2004 stated, “how much the role of paramedics has changed over the past 20 years from the more traditional roles to what we have now”. Moving from 2004 into 2019 and having a look at where we are now, they were spot on. But with this came an increase of required knowledge for paramedics and a big expectation from the general public on what we can do when we walk through the door.

So what does my mini history lesson have to do about an article for developing a paramedic degree in Canada you might ask? It provides a context of where we have come from to where we are now, to help identify why we need to establish a secure direction and future for the paramedicine profession.

Now before all the non-believers of degree-based entry

to practice in the northern hemisphere start saying how wrong I am and start thinking of all the creative ways they could readjust my thinking, please read on a little further, as I completely understand where you are coming from. Personally I am a big believer of collaborative efforts and there certainly is some common ground out there in which we could all work together on this. As a paramedic profession, we need to lead this change together, because allowing someone else to do it would be a disaster and completely out of touch with our expertise in this field.

The key message here is that the evolution of change that has occurred in our profession over the past 40 years has reached the limits of what our traditional paramedic education methods can handle. If I use my experience as an example, what was taught to me and many other paramedics of my vintage over 20 to 30 plus years ago, via traditional paramedic education methods and professional development, that theory is now taught at a university in three to four-year paramedicine degree. I completely agree operational experience can't be taught within a university setting, however high-level clinical thinking and clinical reasoning can be. Coupling that with quality clinical placements during their degree, with quality mentoring when they graduate, can enable you to mould your graduates into top class paramedics. The general public now expects this higher level of care and knowledge when a paramedic arrives to treat them.

The next area we also need to take into consideration is the financial costs associated with training to any EMS agency. This is probably not something you've thought of before, especially if you do not operate within a managerial or financial part of the organization. However, the cost to train a paramedic from day one to independent practice is expensive to say the least. Degree entry to practice enables EMS organizations to save money by not having to bear the cost of that initial theory and development of paramedic graduates. It takes around four to five years for an applicant to go from entry at PCP to Independent practice as an ACP. Think of how much more money would be available within your organization if that time was cut to one year, as an example. The money saved can be reinvested back into the organization via more staff or professional development for existing staff. The reinvestment potential back into the organization is massive.

Now I know this is a big shift away from traditional on the job training, which I can loudly speak for as I am a product of that training method. I'm not saying that this method is bad or wrong in any way, however if we look to other countries like the UK, Australia and New Zealand who have all been doing degree entry for practice for 15 to 20 years now, the quality of care has not decreased, it has increased due to the knowledge, clinical reasoning and solid graduate internships being used to transition from university into clinical practice.

We also need to look at other health professions that require degree entry as well. These include nursing, medicine, physiotherapy and pharmacy as examples. By following that style of pre-employment education, we are now playing in the same entry to practice arena. By no means am I comparing paramedicine to any of the previously mentioned health professions, I'm only pointing out that by following the same educational pathways for pre-employment, your profession, "Paramedicine", takes a big step forward in better recognition amongst other health professions already there.

One of the biggest stumbling blocks that also comes up as an extremely hot topic, is the topic of recognition of skills. The most common complaint I've heard relating to the topic of degrees as entry to practice, comes from paramedics already practicing asking, "why do I need a degree to keep working as a paramedic when this change occurs?". It's a good question and frankly the concept of degree entry to practice has been sold to them in the wrong way. One area that is key here and certainly needs clarification, is that recognition of skills and grandfathering clauses would also be implemented to recognize and acknowledge paramedics from a certain skill set, at their current skill level. Within Canada, the consensus seems to be that from Advanced Care Paramedic (ACP) level and above, they would not require a degree to continue practicing at that level. This would also bring them in line with ambulance services around the world like Australia, New Zealand and the United Kingdom, that have already made this leap.

But what about those paramedics working at Primary Care Paramedic level, what will happen to them once degree entry to practice takes place? If we look at what other ambulance services around the world did, they developed internal upskilling programs to match the future degree entry point. Now Canada is in a great position already to achieve this, based on your current programs in place for becoming an ACP. There are two trains of thought on this process. One, put them through a bridging degree, which we will discuss shortly, or two, have them complete the standard ACP pathway. Internationally the bulk of ambulance services followed a series of professional development programs that would be equivalent over time to what your current ACP program offers. These ambulance services set the pace by which they wanted all PCP equivalent level officers to complete this training by, which historically has been around five to ten years. They would also set an end date by which no new applicants would be accepted via this entry to practice pathway as well. This enables a transition out of that training model and transition into a degree entry to practice model. On a little side note, by no means am I trying to say the PCP level would disappear completely, as there are many areas such as low call volume or volunteer areas, where it still

maybe extremely useful. It would however cease as the primary entry to practice method.

Bridging degrees for paramedics are a great way to enable paramedics requiring a degree to close the gap they need to meet future practice requirements. In Australia for example, they first started to appear in 1996 with many Canadian paramedics being the primary international applicants. However, if we reflect back on the design of these early bridge degrees, they didn't really cover much around our paramedic specific curriculum. But, looking at current bridging degrees for paramedicine, they provide a very specific paramedic curriculum more relevant to today's needs and requirements within this space. As I mentioned earlier, Canada is in a unique position in the development of these type of bridging degrees. Primary Care Paramedics will end up being your primary candidates for this level of education and frankly you shouldn't reinvent the wheel. Collaboration is key here and one method that would work very well is to look at your current Advanced Care Paramedic Education Program as your initial building block to make this happen. Colleges and Universities may need to work together to establish this bridging degree. They also have the ability to look at what other countries like Australia, New Zealand and the UK have done in the space and maybe even collaborate with university academics who have already led the way there, to produce the bridging degree that is right for Canadian paramedicine.

Now let's look at a pure undergraduate degree, specifically designed for paramedicine. Just like our profession, undergraduate degrees evolved over time as well. As creating a specific undergraduate degree for paramedicine is relatively new to Canadian university education, with Prince Edward Island University being an example of such a degree in Canada, you have a big advantage over other countries who have done this before you. One thing all of these degrees have in common is inclusion of solid foundational skills in the initial years of the degree, all the way through to advanced and future proofing skills in the final years of the degree. Because there are other examples from multiple universities in Australia, New Zealand, the UK, plus Canada, you can look at what they have done and create an undergraduate degree designed for the current and future needs of paramedicine within Canada and abroad.

But what about the length of an undergraduate degree? In some countries they are three years (Australia, New Zealand and the UK); and in others they are four years (Canada and the USA). In fact, Professor Peter O'Meara broke the traditional structural mould for paramedic degrees in Australia when he created the four year Bachelor of Paramedicine with Honours, which incorporated traditional paramedicine, future directions of paramedicine and public health. The other extreme can be seen in

both the original Griffith University two-and-a-half year accelerated degree that I created in 2014 and the two-year University of Tasmania accelerated degree as well. In essence, both are three-year degrees compressed over three semesters per year, with minimal time off for students. However, a lot can be said for Professor O'Meara's design and the significant advantages a paramedicine program over four years can provide to students from both an on-campus and off-campus experience.

There is no magical solution here on what is the perfect paramedicine degree, but based on current undergraduate degree structures within Canada, my guess on your paramedicine degree length, would be in the form of a four-year (2 + 2 model) degree structure. In saying all this, lessons I've learnt from the undergraduate and postgraduate degrees I have designed, plus the advice from others who have done the same when designing a paramedic degrees is this:

1. Flexibility – the paramedicine profession constantly evolves around evidence-based practice.
2. Into the Future – Design it to meet the needs of your graduating cohort. Don't look at what paramedicine is doing now, look at where it is going by the time your students graduate and ensure you build that level of integration into your degree program.
3. Listen to your industry – Engage with the Paramedic Chiefs of Canada, listen to what services around the country are telling you and what they would expect from your graduates.
4. International Paramedicine – Paramedicine is growing all over the developed and developing world. Develop your degree in a way that can meet not only the needs of Canada, but the application of paramedicine Internationally as well.
5. Collaborate – Don't reinvent the wheel. You are not alone. Take advantage of the experience from others within Canada and internationally. You will be able to accomplish some much more over a shorter timeframe.

But what about the delivery of your paramedic specific content within your degrees? As with most countries already delivering paramedic degrees, you are not flush with paramedic academics. Don't worry, they will come over time. As an industry and within the academic community, we are extremely young compared to other industries. Implementing this level of education will lead to the development of future academics and you will probably be surprised just how many current paramedics around Canada already teach into other health-related disciplines currently at a university somewhere. In saying that you already have a wealth of experienced paramedics within Canada you can use to help develop and teach this content. In fact, some of them might not even have a degree! So what, they have experience and lots of it, which is needed to lead this development.

Paramedics need to lead your paramedic specific content. They are experts in their field, so use them to teach and develop the next generation. If they have never taught at a university before, then the university can provide them with guidance and training they need to be successful sessional (part-time academic) or full-time academics.

The only way we will grow as a paramedic profession, is if it is led by paramedics and paramedic thought-leaders. The more paramedics out there who become thought-leaders in this profession, the bigger and stronger we will become as a profession. **cP**

ABOUT THE AUTHOR



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Duncan has worked within the ambulance sector for 22 years. His experience spans rural, metropolitan, aeromedical, commercial and military operations, as a paramedic, manager and educator. In 2014, Duncan accepted the role of Paramedicine Program Director at the School of Medicine, Griffith University, to develop Griffith Universities new Bachelor of Paramedicine Program. In 2018 Duncan stepped away from his role as the Griffith University Paramedicine Program Director, shifting his focus over to his PhD, which focuses on a comparison of international ambulance modules in developed and developing countries.

Duncan's research interests include paramedic development in developing countries, simulation technologies, low acuity paramedicine and community first contact CPR, to improve out of hospital sudden cardiac arrest. His interest and research towards new simulation methodologies has led to the development of a more immersive and authentic educational environment, from which both student paramedics and qualified paramedics alike, can enhance their learning experiences.

Most recently Duncan has been engaged with the Mongolian Ministry of Health and the World Health Organisation (WHO), in the restructuring and development of emergency medical services and disaster management, within Mongolia. He is also working with the Republic of the Maldives Ministry of Health, in the development of their new National Ambulance Service.

Whilst maintaining his own professional development, Duncan has completed an Executive MBA (RMIT), Master of Commerce (RMIT) When not at work, Duncan likes traveling and camping with his two kids and performing as a professional tribute artist all over Australia.

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