BACK TO THE FUTURE 2025:

THE IMPACT OF TERTIARY EDUCATION ON PARAMEDIC SYSTEMS & PARAMEDIC LEADERS IN CANADA?

Joe Acker
Director, BC Ambulance Service
Adjunct Sr. Lecturer, Charles Sturt University



Charles Sturt University


2025
Paramedic Chiefs
of Canada
Chefs Paramédics
du Canada



1. Prepare your paramedics
2. Prepare your systems
3. Prepare your leaders


ALBERTA
COLLEGE OF
PARAMEDICS


COPR
OCRP
Canadian Organization of Paramedic Regulators
Organisation Canadienne des Régulateurs Paramédicaux


AHPRA


PROFESSIONAL PARAMEDIC
ASSOCIATION OF OTTAWA


CERNRCRSP
CANADIAN EMS RESEARCH NETWORK
RESEAU CANADIEN DE RECHERCHE
EN SOINS PREHOSPITALIERS


JUSTICE
INSTITUTE
of BRITISH COLUMBIA






THOMPSON RIVERS
UNIVERSITY


NAIT


ONTARIO
PARAMEDIC ASSOCIATION




COLLEGE OF
paramedics
leading the development of the paramedic profession


Paramedic Association of Manitoba


hcpc
registered
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Assoc. Prof. Tony Walker
CEO, Ambulance Victoria
Australia



Jason Killens
CEO, SA Ambulance
Australia

Operations Director
London Ambulance Service
UK *(former)*

TODAY



TOMORROW

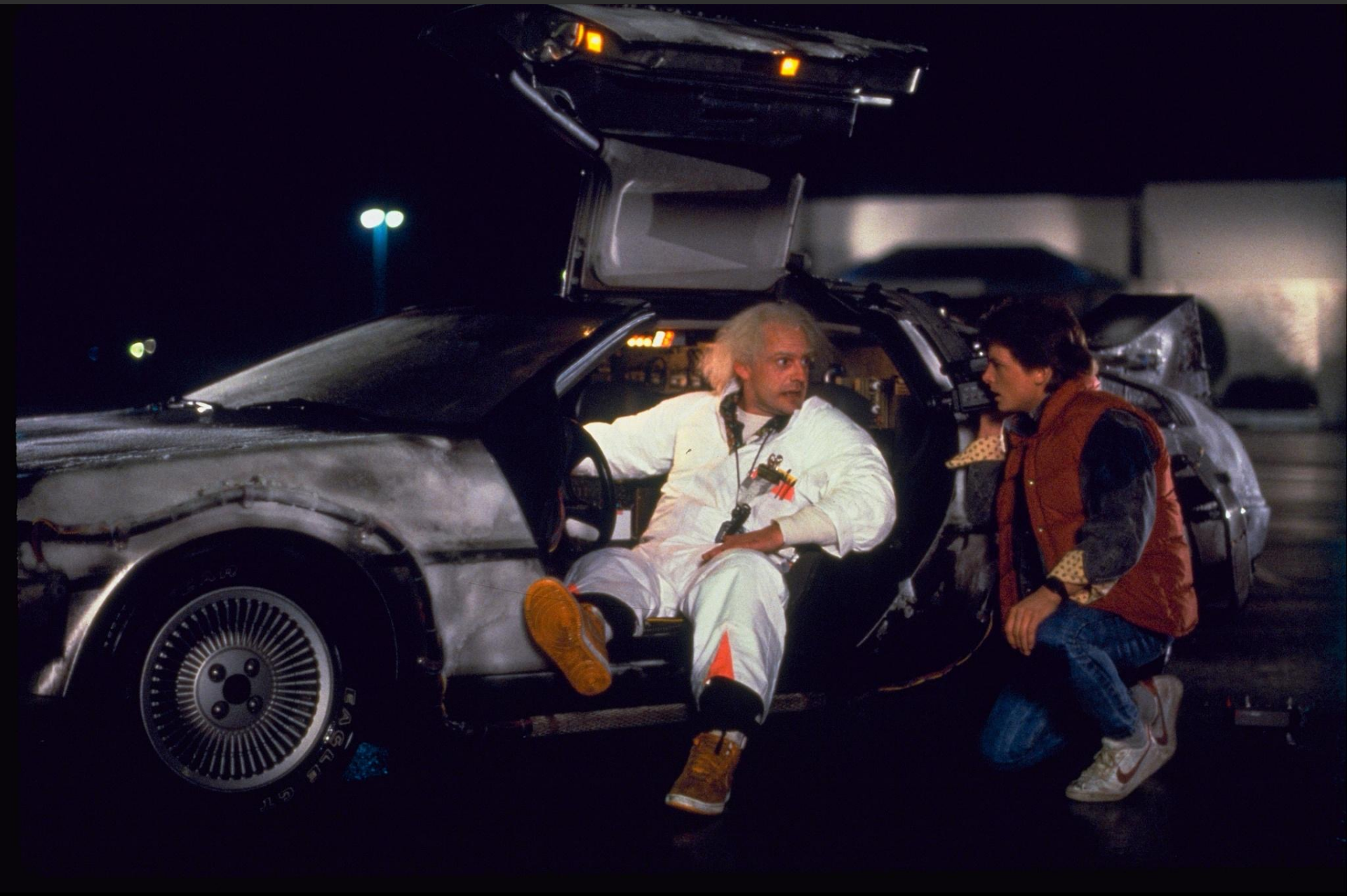


OPPORTUNITIES FOR UNIVERSITY GRADUATES







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LAST TIME DEPARTED

The first paramedic university degree course was started by Charles Sturt University (CSU) in 1994 *(Lord, 2003)*

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PROFILE

THE DEVELOPMENT OF A DEGREE QUALIFICATION FOR PARAMEDICS AT CHARLES STURT UNIVERSITY

Article No. 990001

Bill Lord

In 1994 the development of a professional degree level qualification for Australian ambulance officers was realised when Charles Sturt University (CSU) and the Ambulance Service of New South Wales (ASNSW) collaborated to establish a *Bachelor of Health Science (Pre-Hospital Care)*. Although pre-hospital qualifications had already made a transition in some states from in-house programs, developed and delivered by the various employing agencies, to the TAFE sector, this course represented the first university based program developed in Australia for pre-hospital practitioners. A similar program at Victoria University of Technology (now Victoria University) was subsequently offered for the first time the following year.

The development and implementation of a degree program was welcomed by many in the industry, although some questioned the relevance of tertiary studies for ambulance officers. This was not surprising given that some individuals are still passionately divided over the decision to transfer nurse education from the hospitals to the higher education setting. The rationale for the shift in education was however, different in each instance. Nursing education in its apprenticeship-based form was an extremely costly exercise for the employing organisations. Hence a major determinant in the move to university-based education involved the assessment of the savings to be gained in shifting the cost of education away from State funded employers to Federally funded institutions of higher education. While this is also a factor influencing decisions about the future of education in the ambulance sector, the rationale for establishing a degree level program for ambulance officers in NSW included a need to progress the professionalism of the discipline and to develop skills that were traditionally lacking in existing vocational training programs. Such skills included knowledge in the area of health services management. As such the course drew heavily on the existing expertise in this area within the Faculty.

Paramedics working at the intensive care level gained credit for 75% of the course content for prior learning and experience. This left six subjects to complete - five health management subjects and one dealing with clinical issues. Although the health management focus helped to bridge knowledge gaps in this area, both the extent of the management content and the amount of credit allowed for prior learning were later criticised by enrolled and prospective students, as well as sections of the industry.

The first major review of the course occurred in 1998 when CSU decided to offer the Bachelor of Health Science (Pre-Hospital Care) on a full-time basis from the Bathurst campus of the University. The target audience was individuals interested in a career

Author: Bill Lord

AUSTRALIA 1994-2018

- First degree at CSU (1994)
- Course accreditation by CAA (2007)
- Approved to be a registered profession (2016)
- 20 Universities offer paramedic degrees (2017)
- ~35 paramedics hold PhDs
- Paramedics will join national registration scheme (2018)











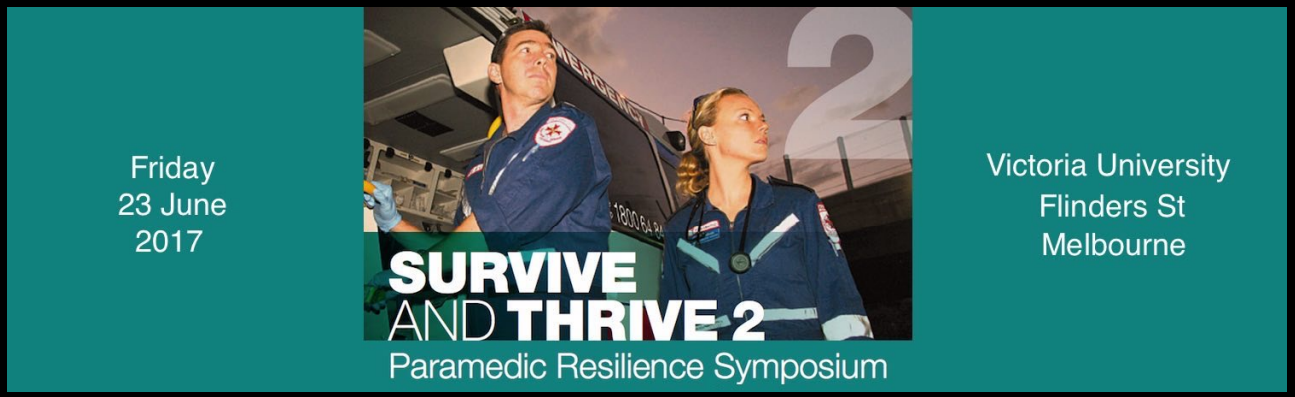
AUSTRALIAN SYSTEM PERSPECTIVES

+ INNOVATION & CHANGE

- Workforce more adaptable to change – more prepared to challenge the status quo & adapt to changing needs.
- Much stronger base to allow enhanced practice



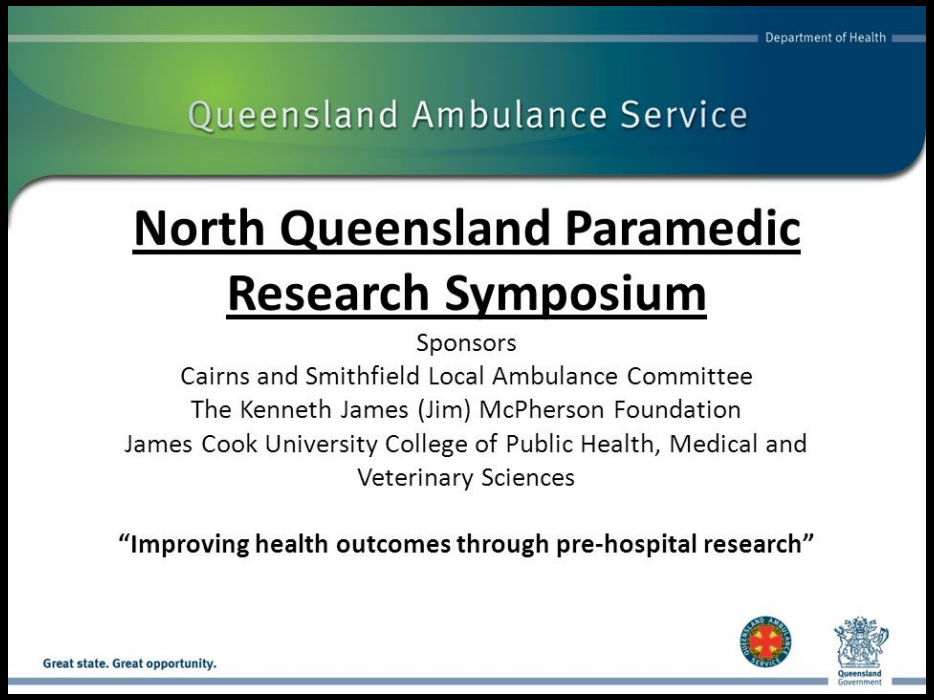




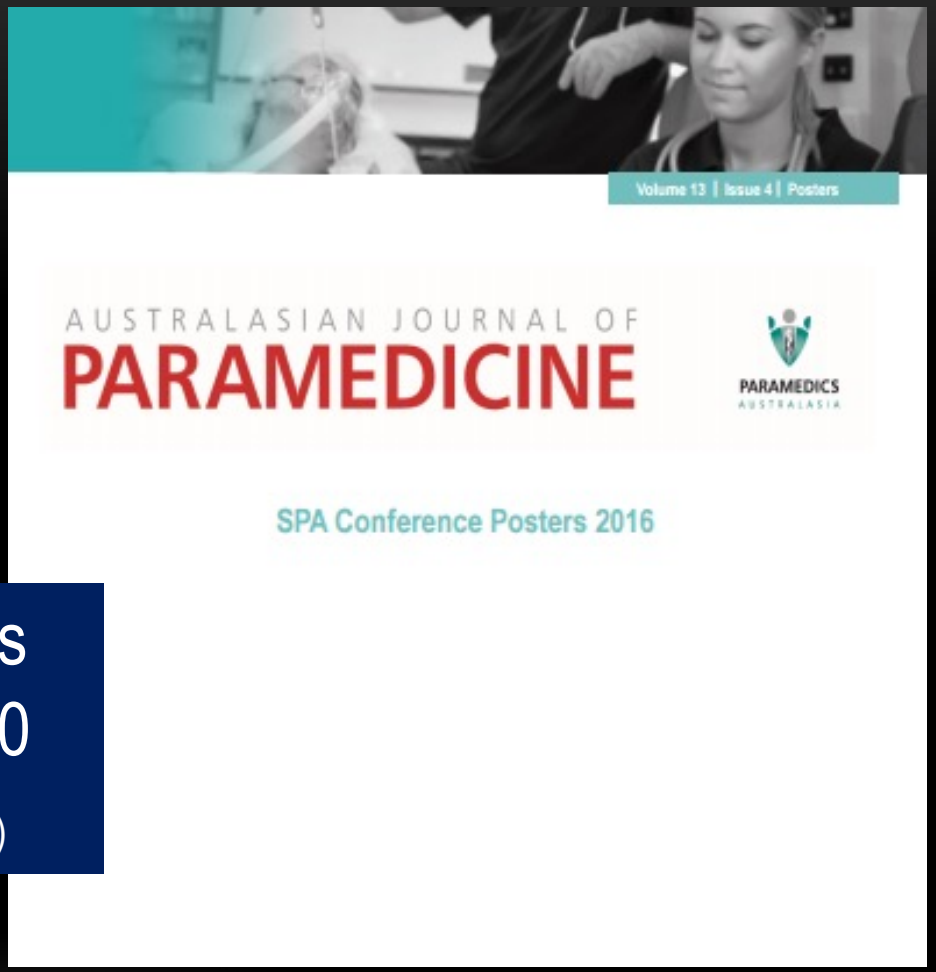
+ RESEARCH

- Graduates understand research & actively involving in driving some of the new research





2016 Student Paramedics Australia Conference – 10 Research Posters (AJP, 2016)



Australasian Journal of Paramedicine special edition of ALL-STUDENT research *(AJP, 2014)*

Vol 11, No 5 (2014)

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Editorial

Student research: the future of paramedicine

Peter O'Meara BHA, MPP, PhD[1]

Affiliation:
[1]La Trobe University, Victoria

For the first time since the establishment of a paramedicine peer-reviewed journal in Australia and New Zealand, a special edition is being published specifically for student contributions. This is an important juncture in the evolution of our profession that recognises the importance of the next generation of paramedic practitioners, scholars and leaders. It really does mark a departure from our vocational training roots to a tertiary educated health profession that works in partnership and alongside other health professions (1).

At a personal level, this edition is even more significant as we celebrate the 40th anniversary of the paramedic conference that was held in Melbourne in 1974. The fledgling Australian Institute of Ambulance Officers, now Paramedics Australasia, organised the event and many ambulance services throughout Australia supported staff who wished to attend. Even at that time, student members were recognised and given significant roles in the event. I well remember as a young student the nervousness that I felt when officially thanking the after dinner speaker, the late Dr John Birrell, the long-standing and eminent Victoria Police surgeon who contributed so much to child safety and improving road safety throughout the world (2).

This special edition showcases contemporary student work from both Australia and New Zealand on a diverse range of topics addressing clinical (3-5) and systems issues (6,7). From Australia, Lynsey Smit (3) provides a literature review to ask whether antibiotic prophylaxis in pre-hospital trauma care has a place in the civilian context, while Yu-Tung Chang (6) compares anaphylaxis guidelines from around the world. Christian Winship, an honours student at the time, looks at pre-hospital cardiac arrests attended by fire fighter first responders in Melbourne (5). The New Zealand contribution offers a wide range of clinical topics, as well as raising questions about paramedic education and retention in the workforce (4,7). One message that emerged from the papers was the importance of addressing the issues that confront paramedics and paramedic services that operate in remote or extreme environments, irrespective of whether services are publicly funded, privately operated or provided through the military (8,9). These papers collectively provide readers with a look into the future of the paramedicine profession in terms of roles, clinical interventions and professional identity as we adapt to increased knowledge, improvements in technology and the changing needs of our communities (10). These authors and other student paramedics, along with our recent graduates in the workforce, share a heavy responsibility to take the profession into the future through a combination of scholarship, professionalism and engagement in the development of paramedic-related policy (11,12).

The scholarly work published in this edition has value in its own right as a contribution to our growing knowledge base and as pointer to our future practice. More importantly, it provides a window through which we can see our future leaders (13). The challenge for us all, whether we are experienced paramedics, scholars or industry leaders, is to ask what we can do to nurture the next generation in whatever roles they pursue. In terms of research and academic scholarship, we can all contribute to the development of a future paramedicine research agenda and facilitate the necessary resources to encourage and support research and the dissemination of new knowledge and understanding (14). Through research, scholarship and active support, we can all help our health discipline make a meaningful difference to the lives of the patients and communities that are our central motivation.

Dr Peter O'Meara
Editor
Australasian Journal of Paramedicine

+ WORKFORCE CAPACITY

- Has resulted in a significant workforce providing opportunities for services to respond rapidly to changing government policy.





6,804 students enrolled in degree programs (AUS/NZ). Workforce needs projected to be **823** positions. *(CAA, 2015)*

CAA

The Council of Ambulance Authorities
www.caa.net.au

CAA Position Statement
Higher Education Paramedic Student Enrolment Numbers

Wednesday 10th June 2015

The Council Ambulance Authorities (CAA) acknowledges that it is ultimately the right of individual University to determine the number of students it will enrol in their programs on an annual basis.

The recommendations of the Bradley Report (2008) provided for the elimination of caps on student numbers and the establishment of a demand-driven system and deregulation of limitations on higher education student numbers, or a voucher system, in the majority of university courses.

From an industry sector perspective however, this decision places the onus of responsibility on higher education providers to assess industry sector workforce needs and the clinical placement capacity that is available within State and Territory ambulance services, as part of the process in determining student enrolment numbers for their program offerings. Within each ambulance jurisdiction there is strong demand for a finite number of clinical placement opportunities. More recently, ambulance jurisdictions are receiving requests from Universities outside their States and Territories, seeking access to clinical placement opportunities for students enrolled in interstate University paramedic programs.

As such, the finite capacity for clinical placement opportunities, the removal of Commonwealth student caps in 2012 and the move to demand driven intakes, heightens the need for careful planning and forecasting of future paramedic workforce needs.

CAA has considered the estimated total paramedic program enrolments for Universities in Australia and New Zealand in 2014 based on enrolment data provided to CAA by Universities at the end of last year. This data has been contrasted with ambulance workforce information published in the Ambulance Services section of the 2014 Report on Government Services (ROGS).

+ DIVERSITY

- Improved workforce diversity – diversity of graduates is changing diversity of services. In AV they now have 50% women & improving cultural diversity (more reflective of the community)





+ INTERNAL CAREER GROWTH

- Opportunities for alternative career paths such as medicine
- Benefits the individual & service as not stuck in the job for life & can work more flexibly with ambulance & other industries.





- DEMANDS OF EDUCATIONAL INSTITUTIONS



- ENTRY TO PRACTICE GAPS









Research article

Open Access

An investigation of theory-practice gap in undergraduate paramedic education

Rebecca Michau, Samantha Roberts, Brett Williams* and Malcolm Boyle

"This study demonstrates that the majority of students were satisfied with their clinical placement experience; even though they were exposed to < 50% of cases that allowed skills practice." *(Michau, et al, 2009)*

clinical placement experience; even though they were exposed to < 50% of cases that allowed skills practice. Identifying these educational barriers will assist in improving the quality and theory-practice gap of paramedic clinical education.

Background

In Victoria, paramedic education has evolved from post-employment (diploma) to pre-employment (bachelor) education model since 1998 [1]. Paramedic students within the pre-employment model are now required to complete a three year bachelor degree before commencing paramedic employment. This model encompasses an extensive theoretical base, however in contrast to the post-employment model; students are provided with limited 'on the job' skill acquisition via clinical placements. Clinical placements form a fundamental component to undergraduate programs and provide students with a means of

Lessons about work readiness from final year paramedic students in an Australian university

Kylie O'Brien PhD[1,2], Amber Moore BChinMed(Hons)[2,3], Peter Hartley PhD[2], David Dawson MBA[2]

Affiliations:
[1] Deakin University, Burwood, Victoria, Australia
[2] Victo
[3] Dept.

"As Australian paramedic education moves from a post-employment training model to a pre-employment model, further consideration is needed of how courses will best address the development of clinical and practical skills of students and meet the requirements of ambulance service employers." *(O'Brien, et at, 2014)*

training model to a pre-employment model, further consideration is needed of how courses will best address the development of clinical and practical skills of students and meet the requirements of ambulance service employers. Collegiate dialogue between employers, educators and students will assist in addressing this.

Keywords

work readiness, education, paramedics, problem based learning, work integrated learning, curriculum

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Improving the learning experience



Paramedic preceptor: work readiness in graduate paramedics

Dale Edwards, University of Tasmania, School of Medicine, Hobart, Tasmania, Au

SUMMARY

Background: The paramedic profession is growing within Australia, and is undergoing change both in the nature of its roles in health care and in the nature of the education systems that produce paramedic graduates.

Context: Within Australia there are two educational models for paramedic education: the post-employment vocational model and the pre-employment university model. With the progressive phasing out of the vocational model and the rising number of paramedic students there is increasing demand on paramedic preceptors. This increase in demand raises questions about the education of paramedics to perform the teaching role and their work readiness.

Innovation: This article explores issues associated with the work readiness of paramedic ates from the perspecti the preceptor role. Link drawn to the industry tency standards for par graduates.

Implications: This article identifies the need for further research into the role of the paramedic preceptor and the work readiness of paramedic graduates to undertake this role.

preceptors

"The paramedic industry and education providers will need to re-evaluate their definition of work readiness with regard to non-clinical skills, including preceptor skills, to ensure that educational and industry standards are being met."
(Edwards, 2011)

Review article: Paramedic education opportunities and challenges in Australia

Xiang-Yu Hou, Joanna Rego and Melinda Service
School of Public Health, Queensland University of Technology, Brisbane, Queensland, Australia

Abstract

Paramedic education has been undergoing major development in Australia in the past

"Paramedic programmes across Australian universities vary with many different practices, especially relating to clinical placements in the field" (Hou, et al, 2013)

Key words:

Introduct

Paramedic e
medical ter
dedicated specifically to paramedic education in Australia was held in Adelaide in 1995 and laid the basis for agreement on standards for ambulance officers and for the establishment of a national body to address education.[1] In 1994, the first paramedic educational programmes were established at Charles Stuart University[2] and Monash University.[3] Since then paramedic education has been undergoing significant transformation, from an in-house, post-employment training model

national trend in paramedic education moving towards pre-employment tertiary programmes as a model that will become the sole point of entry to the profession in the future. Entry-level paramedic qualifications are offered today in 14 higher education institutions.[6] Also on offer at some Australian universities is a full range of courses from undergraduate bachelor degree level programmes through to postgraduate courses at both masters and PhD levels.

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Community paramedicine: Higher education as an enabling factor

[1]Peter O'Meara PhD, [2]Michel Ruest, [3]Christine Stirling PhD

"A closer match between the paramedicine curriculum and the emerging roles of paramedics, whether they are community paramedics, extended care paramedics, or as yet unformed roles is needed if paramedics are to become valued members of the health care team" (O'Meara, et al, 2014)

6). Rural paramedics, in particular, are increasingly working as the 'expert' in the

of appropriate clinical pathways for patients and clients (7). This paper addresses paramedicine education as one of these enabling factors.

- WORKFORCE WITH DIFFERENT PRIORITIES







"Greater clarity is needed in relation to both career structure (to take into account the likelihood of a more mobile workforce, between jobs, services and roles), and the role of the paramedic in relation to the broader health system"
(Joyce, et al, 2009)

Trends in the paramedic workforce: a profession in transition

Catherine M Joyce, Jo Wainer, Leon Piterman, Andrea Wyatt and Frank Archer

AMBULANCE SERVICES play a key role in the Australian health system, as the primary providers of pre-hospital clinical care, emergency care and specialised transport.[1] Although at present
n broad health system
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well as developments in
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Victoria to illustrate and
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Lecturer, Department of Community Emergency Health and Paramedic Practice

Frank Archer, BMedSc(Hons), MB BS, BEd, MEd, MPH, FRACGP, FIMC(RCSEd), FAFPHM, Head of Department,
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Monash University, Melbourne, VIC.

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A changing work environment

Utilisation of ambulance services has increased markedly in recent years. Responses by ambulance services nationally increased from 13 per 100 000 persons in 2002 to 15 in 2007, representing 15% growth (Box 1).[2] The number of patients treated rose from 10 per 100 000 persons to 13 (30% growth) in the same period. The factors identified as impacting on increased demand for ambulance services include: a shift in setting of care from the acute to the community setting; pressures on the primary health care sector (eg, general practitioner workforce shortages); ageing of the population; and increasing prevalence of chronic conditions.[1,3] Demand for ambulance services has been forecast to continue to increase in the coming years.[1]

This increasing demand has contributed to mounting pressure on the paramedic workforce. A recent survey by the Ambulance Employees Association reported high levels of stress and fatigue in the Victorian paramedic workforce, with 98% of respondents reporting workplace fatigue in the last 12 months.[4] Main reasons for fatigue included heavy workloads (73%) and no meal or rest breaks during shifts (69%). Eighty-seven percent reported that fatigue had affected their judgement at work.[4] This is an unpublished study conducted by a union using a relatively small ($n = 346$) and non-random sample, and thus may overestimate the extent of these problems in the Victorian paramedic workforce.

The nature of paramedic work is also changing, with increased responsibility for clinical decision-making and treatment. This is evident in changes in the categories of patients treated by ambulance services. Patients "treated but not transported" comprised 9.8% of all ambulance service patients 5 years ago, rising to 13.8% in 2006–07.[2] In per capita terms, this is a 68% increase in this


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BACK IN TIME (2005-2017 UK)

- Paramedics registered by HPC (1999)
- Bradley Report (2005/2011)
- HPC Standards of Proficiency (2007)
- High Quality Care for All (2008)
- Pre Registration Education & Funding for Paramedics (2008)
- Career Framework (2014)
- CoP recommends BSc by 2015



DH Department of Health

Taking Healthcare to the Patient

Transforming NHS Ambulance Services



ASSOCIATION OF AMBULANCE CHIEF EXECUTIVES



Taking Healthcare to the Patient 2:

A review of 6 years' progress and recommendations for the future

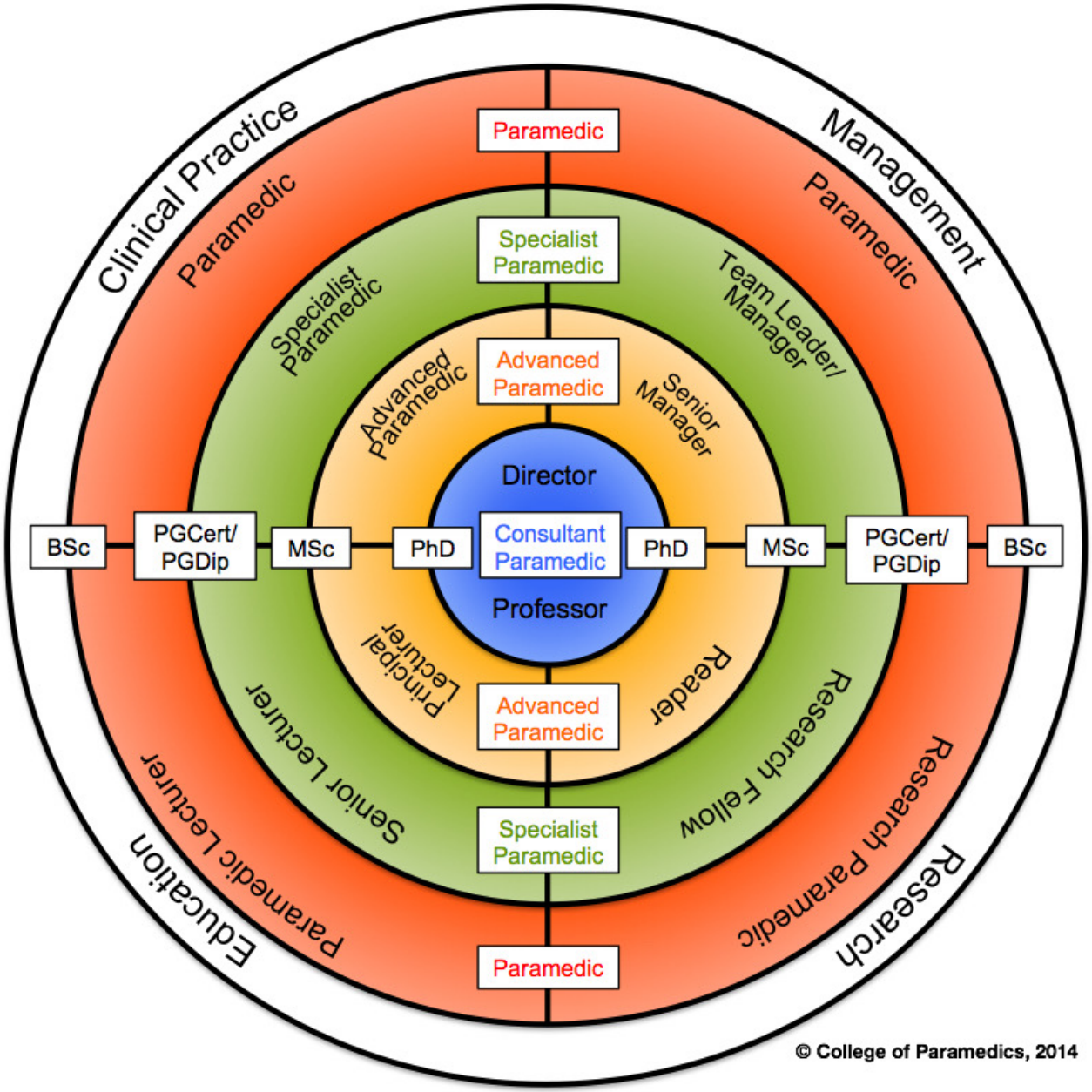
June 2011

+ NEW MODELS OF CARE





College of Paramedics Career Framework 2014



© College of Paramedics, 2014

- RETENTION ISSUES

Ambulance services face paramedic shortage this winter, NHS data shows

Services in England are short of 873 paramedics, with some plugging gaps with recruits from Poland, Finland and Australia





28.03.17

Time to address paramedic retention rates

Source: NHE Mar/Apr 17

Following the National Audit Office's (NAO's) recent report into NHS ambulance services, Gerry Egan, chief executive of the College of Paramedics, says careful attention is needed to assess the reasons why so many paramedics have left, and continue to leave, the ambulance services.

NHS IN CRISIS: Paramedics recruited from abroad as more quit ambulance service



Australian paramedic graduates transitioning into UK NHS ambulance services: what are the potential challenges?

Dr Scott Devenish, lecturer, paramedic science, School of Clinical Sciences, Queensland University of Technology, Brisbane;
Prof Michele Clark, chair of the University Human Research Ethics Committee, Queensland University of Technology, Brisbane;
Prof MaryLou Fleming, head of school, School of Public Health and Social Work, Queensland University of Technology, Brisbane;
Prof Vivienne Tippett, professor of paramedic science, School of Clinical Sciences, Queensland University of Technology, Brisbane.
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Abstract

With United Kingdom (UK) Ambulance National Health Service (NHS) Trusts and Foundation Trusts actively recruiting Australian paramedic graduates, this article seeks to stimulate discussion by identifying differences existing between the two ambulance systems, as well as highlighting potential challenges that Australian graduates may face when transitioning to the UK ambulance service. It also identifies similarities between Australian and UK ambulance systems, which may assist new graduates to overcome the transition shock. This article suggests that transition shock is not solely related to Australian graduates moving to the UK, and may well be present for graduates moving to comparable international ambulance services in Canada, the Middle East, Ireland and South Africa.

Key words
•Ambulance •Australian •Globalisation •Graduates •Transition •UK

Accepted for publication 7 September 2015

United Kingdom (UK) ambulance services are actively recruiting Australian paramedic graduates (Wallis et al, 2015). In this article, we seek to stimulate discussion by briefly examining the differences and some similarities between the two systems with a view to highlighting potential challenges that Australian graduates may encounter when transitioning into UK Ambulance National Health Service (NHS) Trusts and Foundation Trusts. These challenges may not be unique to Australian graduates transitioning to the UK, and may be applicable to other graduates moving to international ambulance services based on the Anglo-American model of practice.

Background—A comparison between UK and Australian paramedic programmes

University paramedic programmes in Australia and the UK commenced as early as 1994 in Australia (Fields, 1994; Lord, 2005) and 1998 in the UK (Carney, 1999). The transition of paramedic education and training from an apprenticeship in-house vocational model to a pre-employment university model increasingly means that new entrants to the profession must first gain a bachelor's degree before applying to an ambulance service for employment.

During tertiary-based paramedic programmes in Australia and the UK, students undertake subjects in core sciences such as anatomy, physiology and pharmacology. Social science subjects such as introductory public health and principles of evidence-based practice, sociology, communication and mental health are also completed (Willis et al, 2009; College of Paramedics, 2014). The development of clinical skills is an important component of the paramedic curriculum in both

Ethical recruitment and employment of internationally educated paramedics

A shortage of skilled paramedics in the UK has led the London Ambulance Service NHS Trust to look overseas to help fill vacant posts. **Ian Peate** considers the ethical issues associated with the migration of healthcare workers and whether alternative solutions should be explored.



Ian Peate, consultant editor, Journal of Paramedic Practice

'Be more than a paramedic. Be a London paramedic. London. No ordinary challenge. Become a paramedic in the world's busiest paramedic service and you'll receive diagnostic training and make clinical decisions.'

And so the advertisement goes on on the service's website.

The shortage of skilled British paramedics has encouraged an aggressive bid to tempt Australian paramedics to make the move and is part of a number of initiatives the London Ambulance Service NHS Trust (LAS) is using to help fill posts that are vacant. LAS is seeking to recruit registered paramedics from overseas for the first time in a bid to fill their empty posts. Australia and New Zealand are being targeted as the skills and training are said to closely match those in the UK. In order for LAS to do this, they had to seek approval from the UK Border Agency so as to offer sponsorship for 100 work visas a year for those paramedics who are non-European.

There are currently 1810 paramedics in LAS, with another 150 who are in training. Year-on-year increases in demand, as well as a need for more registered healthcare professionals to respond to patients, have led to a need for a greater number of paramedics.

Paramedics who are recruited from overseas will need to undergo a conversion course prior to being able to treat patients.

Retraining those from overseas is much quicker, and usually requires only a short four-week conversion course. The Health and Care Professions Council (HCPC) and each profession at the HCPC has its own detailed criteria for assessment. These are outlined in the profession-specific elements of the standards of proficiency. The applicant must satisfy the registration assessor when making their application as to how they meet the benchmark standards of proficiency. This can be established through a combination of education, training and experience achieved in practise of the profession for which they are seeking registration.

The HCPC makes it a requirement to communicate effectively in English as this is key to working effectively as a paramedic in the UK. As such, the HCPC can ask applicants for information about their ability to use English. This is a requirement for international applicants (such as those from Australia and New Zealand) unless the person is a national of a relevant European State other than the UK.

The recruitment campaign has not escaped controversy in Australia. In Victoria, for example, the *Herald Sun* newspaper suggests that London is trying to poach Victorian paramedics to fill the London Ambulance Service's skills shortage (Van den Berg, 2014). This it is felt may prompt fears that the two-year-old ongoing industrial relations dispute (a stalemate) could drive skilled workers overseas. One fear is that there will be many Victorian paramedics who would be prepared to go and work in London as a result of a lack of recognition and poor pay rates, along with the prolonged industrial dispute with the State Government.

Ambulance services (and patient care therefore) in Australia may suffer as a result of the LAS initiative as they may not be able to afford to lose

> Ambulance services (and patient care therefore) in Australia may suffer as a result of the LAS initiative

+ GENDER DIVERSITY

- Women are now 35% more likely to go to university than men



- UNI VS VOCATIONAL FRICTION

Need to educate clinicians and mentors in the reasons why we need our students to follow a structured approach (349)





"Need to educate clinicians and mentors in the reasons why we need our students to follow a structured approach" *(Ryan & Halliwell, 2012)*



Paramedic decision-making–how is it done?

Lizzie Ryan MBA (Open), MSc, MEd (Open) is the Education Business Manager for South Western Ambulance Service NHS Foundation Trust. **David Halliwell** MSc Paramedic is the Head of Education for South Western Ambulance Service NHS Foundation Trust. **Email for correspondence:** lizzie.ryan@swast.nhs.uk

Abstract

In 2005, The Bradley Report called for a move to higher education and the ambulance services saw the advent of the degree and diploma paramedic. Historically, ambulance services have used the Institute of Healthcare Development (IHCD) vocational educational programmes to develop and educate their own staff, using a skills escalator approach to paramedic status, rather than supporting their development in the Higher Education (HE) environment. More recently the services have started to use graduate paramedics educated and developed to the requirements of the HPC Standards of Proficiency (2007) in universities across the UK. This article considers the decision-making process of the graduate paramedics against that of the IHCD paramedic, and involves the hyperthetico-dedutive and intuitive approaches used by paramedics to inform their decisions, and the treatment that they provide. In addition, it involves the initial work of two research ethics approved empirical studies, currently in progress, that form part of the the authors doctoral studies involving sample groups of graduates from an IHCD programme, and a foundation degree and BSc Honours degree at two UK universities.

Key words
● Paramedic decision-making ● Hypothetico-deductive ● Intuition
● Mentorship ● Experience

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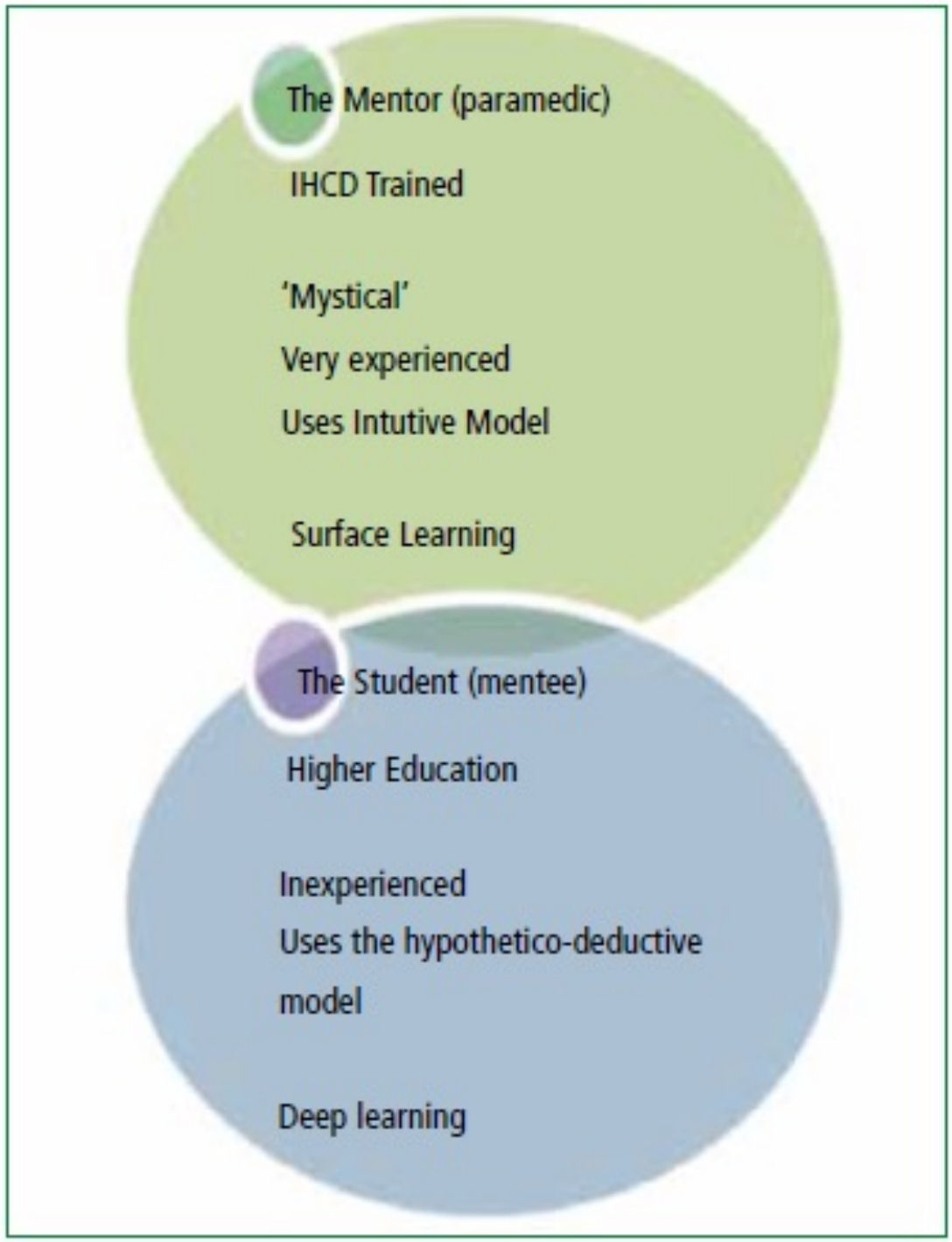
With the university route being used to educate our future paramedic workforce before entry onto the professional register, this article explores the ways that experienced paramedics and technicians make clinical decisions and undertake patient assessment; comparing these with the methods used in this area by student paramedics.

In addition, this paper will explore the possible causes of friction between mentor and student, and will link this to the methods of education used for ambulance clinicians. The authors feel that an understanding of the potential frictions between paramedics who have been educated using higher education, and mentors who have experienced previous Institute of Health Care Development (IHCD) based vocational education, will assist both parties when reviewing the student paramedic/mentor relationship.

The authors are both studying for doctorates and as part of two independent empirical studies that have both received research ethics approval. Study One uses a mixed methodology to research the learning approaches of paramedic students, specifically looking at surface and deep learning in two sample groups of students, 30 from a local university and 30 students who have graduated as paramedics from an IHCD Programme (Halliwell, 2011).

Study Two uses a case study approach with phenomenology and hermeneutics, and involves the comparison of two sample groups of students from a foundation degree and a BSc (Honours) degree at two local universities using interviews, focus groups and questionnaire surveys. Study Two considers whether the students are road or practice ready on graduation (Ryan, 2011). The sample groups in this study involve 30 students on a foundation degree, 50 on a BSc honours degree, 30 employing managers, all of whom were IHCD trained, and eight tutors (four from each university) all of whom were IHCD trained. This article will use some statements made by participants in these two studies to support the arguments made, but cannot provide statistical evidence at this time as the doctorates are still in progress.

When examining the decision-making of paramedics and technicians, it was important for the authors to consider the lessons that could be learnt from other professions, particularly nursing, that have had similar models of mentorship; and who have been through similar changes in education strategies to those currently being experienced by paramedicine in the United Kingdom (UK). In the last 10 years we have seen changes to the way that nurses are educated, and nursing education has movedfrom a nursing school education with a national examination process leading to state registration, to a graduate profession. This change was due to the demands


The Mentor (paramedic)
IHCD Trained
'Mystical'
Very experienced
Uses Intutive Model
Surface Learning
The Student (mentee)
Higher Education
Inexperienced
Uses the hypothetico-deductive model
Deep learning

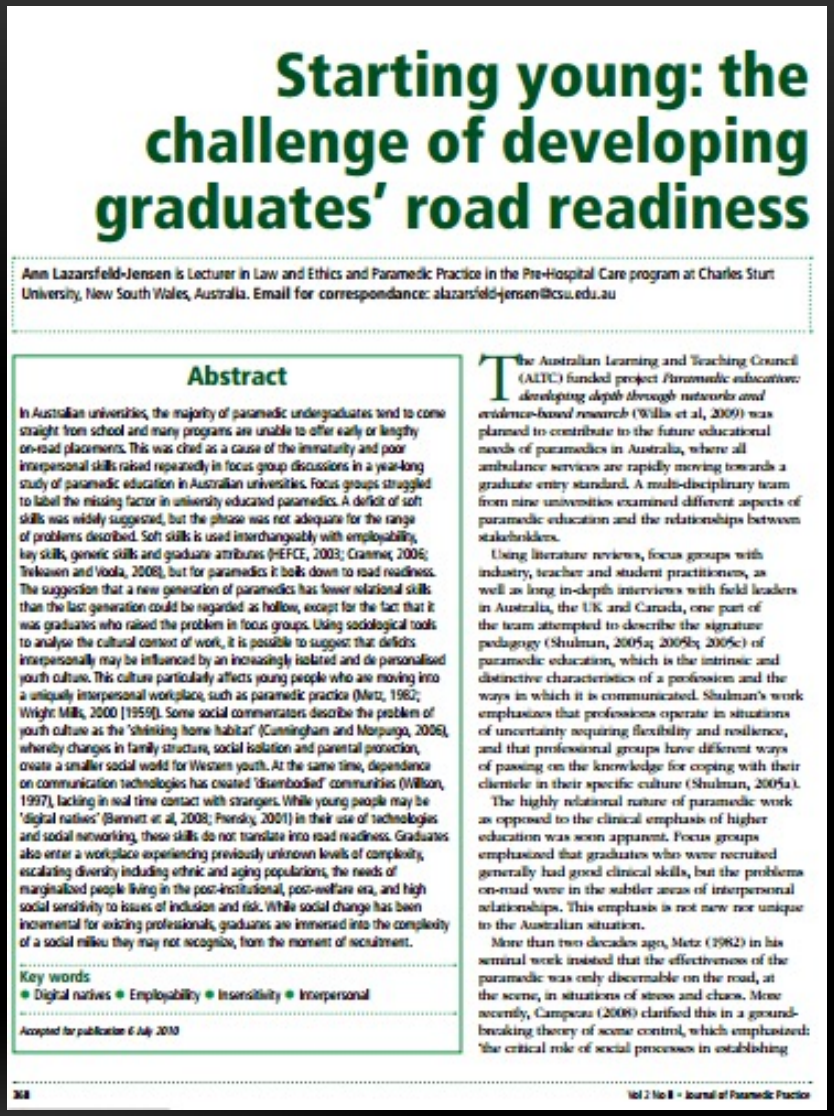
- BULLYING







"Clinical instructors, onroad mentors and trainers, should develop a deeper understanding of the culture from which young people now emerge" (Lazarsfeld-Jensen, 2010)



Starting young: the challenge of developing graduates' road readiness

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Abstract

In Australian universities, the majority of paramedic undergraduates tend to come straight from school and many programs are unable to offer early or lengthy on-road placements. This was cited as a cause of the immaturity and poor interpersonal skills raised repeatedly in focus group discussions in a year-long study of paramedic education in Australian universities. Focus groups struggled to label the missing factor in university educated paramedics. A deficit of soft skills was widely suggested, but the phrase was not adequate for the range of problems described. Soft skills is used interchangeably with employability, key skills, generic skills and graduate attributes (HEFCE, 2003; Cranmer, 2006; Tinkanen and Vaola, 2008), but for paramedics it boils down to road readiness. The suggestion that a new generation of paramedics has fewer relational skills than the last generation could be regarded as hollow, except for the fact that it was graduates who raised the problem in focus groups. Using sociological tools to analyse the cultural context of work, it is possible to suggest that deficits interpersonally may be influenced by an increasingly isolated and de personalised youth culture. This culture particularly affects young people who are moving into a uniquely interpersonal workplace, such as paramedic practice (Metz, 1982; Wright Mills, 2000 [1959]). Some social commentators describe the problem of youth culture as the 'shrinking home habitat' (Cunningham and Morpurgo, 2006), whereby changes in family structure, social isolation and parental protection, create a smaller social world for Western youth. At the same time, dependence on communication technologies has created 'disembodied' communities (Willson, 1997), lacking in real time contact with strangers. While young people may be 'digital natives' (Bennett et al, 2008; Prensky, 2001) in their use of technologies and social networking, these skills do not translate into road readiness. Graduates also enter a workplace experiencing previously unknown levels of complexity, escalating diversity including ethnic and aging populations, the needs of marginalised people living in the post-institutional, post-welfare era, and high social sensitivity to issues of inclusion and risk. While social change has been incremental for existing professionals, graduates are immersed into the complexity of a social milieu they may not recognize, from the moment of recruitment.

Key words
• Digital natives • Employability • Insensitivity • Interpersonal

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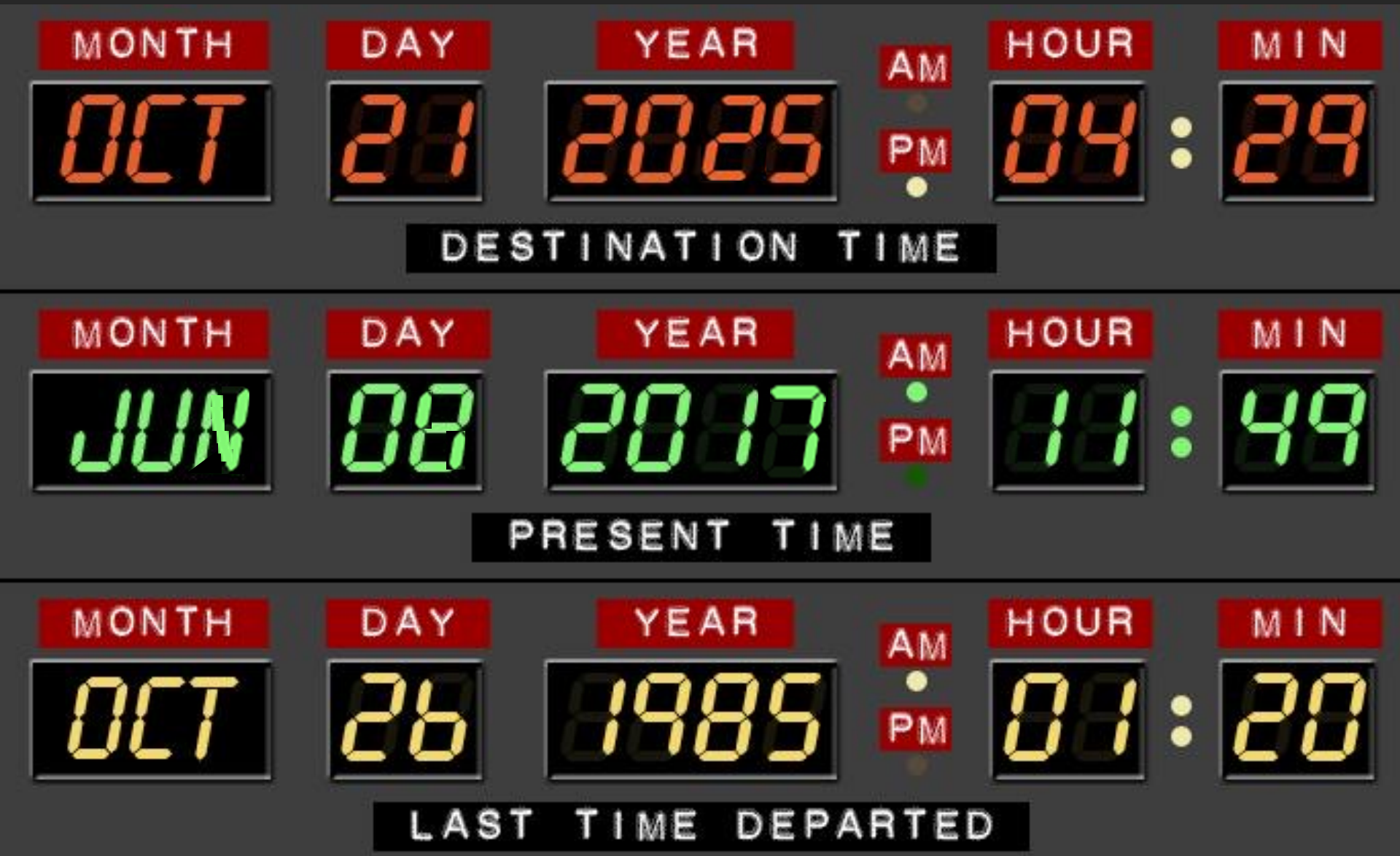
The Australian Learning and Teaching Council (ALTC) funded project *Paramedic education: developing depth through networks and evidence-based research* (Willis et al, 2009) was planned to contribute to the future educational needs of paramedics in Australia, where all ambulance services are rapidly moving towards a graduate entry standard. A multi-disciplinary team from nine universities examined different aspects of paramedic education and the relationships between stakeholders.

Using literature reviews, focus groups with industry, teacher and student practitioners, as well as long in-depth interviews with field leaders in Australia, the UK and Canada, one part of the team attempted to describe the signature pedagogy (Shulman, 2005a; 2005b; 2005c) of paramedic education, which is the intrinsic and distinctive characteristics of a profession and the ways in which it is communicated. Shulman's work emphasizes that professions operate in situations of uncertainty requiring flexibility and resilience, and that professional groups have different ways of passing on the knowledge for coping with their clientele in their specific culture (Shulman, 2005a).

The highly relational nature of paramedic work as opposed to the clinical emphasis of higher education was soon apparent. Focus groups emphasized that graduates who were recruited generally had good clinical skills, but the problems on-road were in the subtler areas of interpersonal relationships. This emphasis is not new nor unique to the Australian situation.

More than two decades ago, Metz (1982) in his seminal work insisted that the effectiveness of the paramedic was only discernable on the road, at the scene, in situations of stress and chaos. More recently, Campeau (2008) clarified this in a ground-breaking theory of some control, which emphasized: 'the critical role of social processes in establishing


MONTH
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11
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PRESENT TIME
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26
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LAST TIME DEPARTED



“If my calculations are correct, when this baby hits 88 miles per hour... you're gonna see some serious shit.” *(Dr Emmett Brown)*

PREPARE CURRENT STAFF

1. Understand the difference between university & vocational graduates both pedagogically & socially
2. Invest in our paramedics to be excellent mentors & leaders
3. Make services “employers of choice” to retain staff in a more competitive world with a more mobile workforce

PREPARE THE CURRENT SYSTEMS

1. Create family friendly organizations & gender-balance in leadership ranks to reflect workforce
2. Create internal pathways for career progression (clinical & non-clinical)
3. Evolve to evidenced-based systems that encourage research
4. Develop strategic relationships with universities and educational institutions
5. Be employers of choice that retain and develop staff

PREPARE CURRENT LEADERS

1. Understand the differences between vocational and university graduates
2. Encourage diversity in leadership
3. Flatten hierarchy for decision making an empower paramedics
4. Support, coach, mentor, and develop new staff who will enter practice young and green (but smart)
5. Embrace innovation


CALIFORNIA
OUTATIME

THANK YOU FOR CREATING THE FUTURE OF PARAMEDICINE IN CANADA!

Joe Acker

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Charles Sturt University