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Things continue to be busy as the Board actively works on enhancing the visibility of the profession through ACAP submissions, delegations, publications, lobbying, letters, meetings, editorial comments and of course – the greatly improved new website.

Since the Western Australian Joyce Inquiry which supported registration of Paramedics, ACAP has been in constant contact with senior personnel within the WA Health Department. In March I had the opportunity to present at the WA Clinical Senate where the Senate members drawn from all sectors of the health workforce further endorsed the need for Paramedic registration and inter-professional health care.

The National Council of Ambulance Unions has recently been established and among its first moves was to issue a statement supporting the registration of Paramedics. We see this as a very positive development, since we believe their influence and networks will be of great assistance and will complement the work already undertaken by ACAP. We hope to meet with them in the near future to explore future activities.

I would like to acknowledge the 10th anniversary of the establishment of the Monash University Department of Community Emergency Health and Paramedic Practice (DCEHPP). On behalf of paramedics throughout Australia, we say well done to all the staff and to Professor Frank Archer for his leadership and ongoing support of ACAP.

In partnership with Monash DCEHPP, the Journal of Emergency Primary Health Care and Ambulance Victoria, we contributed to the second annual JEPHC Symposium, “Doing Things Differently” on the 8 April. There were 160 registrants from most Australian States and New Zealand. It was great to see such a large contingent of students in attendance.

This symposium provided a national forum, with international perspectives; participants were able to engage with important topics in paramedic education and practice in the setting of emergency primary health care. JEPHC will publish the papers from the symposium in November.

**Editor’s Notes**

Amy Cotton

Wow, I have just finished reading all these great original articles, and you will find them all in the following pages. Thank you to all the contributors – your contribution to Response is highly valued by the readership.

You’ll find a number of thought provoking articles that cover issues that are not often thought about, but are all highly relevant in your work as a professional. There is an article providing some key tips on how to best manage observers and loved ones when your patient just doesn’t make it; and self-defence, have you ever thought about this?

In addition, there is a special piece on pain. Following on from the National Pain Summit, I thought a focus on this would be appropriate so there is a piece looking at ‘What is Pain?’, a summary from the National Pain Summit and also the Pain Management guidelines from SA Ambulance Service – how do your CPG’s compare?

And, for the clinical side – there’s an article on sepsis.

**Website**

If you haven’t checked out the new ACAP website then I’d encourage you to have a look, and for the first time this edition will be available electronically for members to access. So now, if you lose your copy you can find it on the web!

**Photos, photos, photos**

We would like to expand our photo library so that we can provide appropriate pictures to support articles. If you have any photos of paramedics doing their jobs (without a view of patients, unless authorised), or training for their work then I would happily receive them. All due acknowledgement to the original source will be made in any reproduction.

**History**

We have received some great pics and information from the past – and it just makes us realise how far we have come. If you have any stories from the past, photos or information – why not consider jotting it down and sending it through!

Don’t forget too, some of the other sections:

- **New Technology**, for new and innovative ideas – have you heard of a new piece of equipment or tool?
- **Education and Training** – have you been involved in some exceptional training, or are you trying something new, let us know.
- **Special Features** – Do you have a topic or issue that you would like to see covered, or a person you would like to know more about? Let us know your ideas.

I’d like to encourage everyone to keep submitting. Your contributions have been wonderful, so keep them coming in! Articles can be as short or as long as you’d like to make them – I am happy to review all submissions and help you to create a piece, so contact me now if you have an idea! Remember that email... editor@acap.org.au.

$150 prize – for this edition goes to Paul McFarlane for his piece on caring for relatives of those who die.

Happy reading...
Dear Amy,

I have received more than a dozen positive responses from your readers both paramedics and vets alike, as well as an opportunity to lecture healthcare professionals at an Australian University. All received the article in the light hearted nature that it was intended with no disrespect to either party. The title of the article (A Humorous but Thoughtful Tale of Nightshift) did in fact convey the correct message. It was intended as a humorous reminder to practice what we are taught as Mr Hando has said, to think laterally and to practice what we are taught as Mr Hando has said, to think laterally and to think about the possibilities. While the attitude displayed may be unprofessional and disrespectful, the majority of my peers work hard to make the patient experience a rewarding one each and every time. I am embarrassed that this rubbish has been published and that other professionals have the opportunity to read it. For the record, the Ambulance Service of NSW does not in any way support the views in this article.

Ric Thomas MACAP

Re: The effect of combined treatment with morphine sulphate and low-dose ketamine in a prehospital setting

I would like to record my disfaste at the story (How Vets can Assist Paramedics in Improving Patient Care) published in the Autumn Edition of Response. Since joining the Ambulance Service Entire Room And Learn), Perhaps if this method was utilized by a gentleman, I find it very disturbing when I am lumped into an unprofessional and disrespectful portrayal of paramedic practice.

The unprofessional and disrespectful attitude expressed in the article reflects poorly on paramedics and ambulance services throughout Australia. I know paramedics take a great deal of pride in their ability to present and conduct themselves in a caring and compassionate way at all times. As one NSW paramedic recently wrote to me, “I ask to those that have the patience and ability to deal with difficult situations at all hours in a professional manner.

John Hando
Collyton Station

Dear Ms Cotton

Like many colleagues in Ambulance, I read the Response magazine and I support the Australian College of Ambulance Professionals in promoting the ambulance profession and standards. Unfortunately, the article by Veronica Madigan and Dr Brendan Smith, “How Vets can assist paramedics in improving patient care” published in the Autumn Edition, does not present the two opposing sides. While the attitude displayed may be unprofessional and uncharitable portrayal of paramedic practice.

The unprofessional and disrespectful attitude expressed in the article reflects poorly on paramedics and ambulance services throughout Australia. I know paramedics take a great deal of pride in their ability to present and conduct themselves in a caring and compassionate way at all times. As one NSW paramedic recently wrote to me, “I ask to those that have the patience and ability to deal with difficult situations at all hours in a professional manner.

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I read the article in the ACAP journal (How Vets can Assist Paramedics in Improving Patient Care) this past weekend and I think the insights are right on the money.

As a critical care paramedic and EMS manager in Canada for over 20 years I believe that paramedics still have a long way to go as a profession to have the clinical acumen and judgment to holistically assess our patients. The humorous anecdote of a paramedic called to treat a patient who doesn’t speak English resonated with me because although I hate to admit it, I have definitely been in that position and done the same thing as your fictional paramedic – treat the obvious presenting symptoms and transport the patient to the hospital so they can figure out what is wrong with the patient! As leaders, educators, mentors and professionals we need to do more to challenge ourselves and our colleagues to further develop themselves as “thinking paramedics” who use good clinical judgment, work harder to holistically investigate a patient’s chief complaint, and use higher level thinking to more accurately assess, diagnose, and treat our patients in the field.

Of note, I was the Chair of a Pan-Canadian advisory committee charged with looking at ways to improve patient safety in EMS. This project was a collaboration between the EMS Chiefs of Canada and the Canadian Patient Safety Institute. The results of this research will be published in June, but I can tell you that after a systematic review, key informant interviews and an international round table we determined that the top 2 reasons that patient safety is jeopardized in EMS is due to inadequate use of clinical judgment and decision making and insufficient education of our providers in clinical assessment, judgment and patient safety. This article validates our findings and provides an interesting comparison between paramedics and vets – you challenge us to raise the bar.

Joe Acker
Director, EMS Chiefs of Canada

Ms Cotton,

I wish to record my disfaste at the story (How Vets can Assist Paramedics in Improving Patient Care) published in the Autumn Edition of Response. Since joining the Ambulance Service Entire Room And Learn), Perhaps if this method was utilized by a gentleman, I find it very disturbing when I am lumped into an unprofessional and disrespectful portrayal of paramedic practice.

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Joe Acker
Director, EMS Chiefs of Canada

I was disappointed by the underlying tone of the article written by Veronica Madigan and Dr Brendan Smith, “How Vets can Assist Paramedics in Improving Patient Care”. The value of the thesis that Paramedics must learn to observe through the senses, the cognitive processes and the intuitive sense cannot be understated, but sadly this was a tale of nightshift. I look forward to reading more on this topic.

John Hando
Collyton Station
International Events

*EMS Chiefs of Canada Conference*

The Emergency Medical Service Chiefs of Canada (EMSCC) was incorporated in 2002 as a national forum for information gathering, policy development, and coordinated action by the leadership of Canada’s EMS systems. In 1995 the EMS group held a national EMS conference that laid the foundations for what is now known as EMS Chiefs of Canada, and for their annual conferences.

A number of ambulance service personnel had the opportunity to attend the Conference in Victoria, British Columbia in 2008. This very successful event was a fantastic opportunity to learn from and share experiences with others who are responsible for the provision of ambulance services. This was followed by an equally successful Conference in 2009 at Niagara Falls, Ontario, Canada.

The 2010 Conference was held at Lake Louise in Alberta, Canada from June 7th – 9th. A range of speakers presented on issues relating to emergency medical services within and external to Canada. While these international events are an opportunity to gain new information they also identify the similarities in the issues facing ambulance service providers.

*International Round Table of Community Paramedicine (IRCP)*

The IRCP promotes the international exchange of information and experience related to the provision of flexible and reliable health care services to residents of rural and remote areas using novel health care delivery models and to be a resource to public policy makers, systems managers and others. While its focus is on rural and remote medicine, the lessons learned may prove beneficial to the better provision of urban health care. (IRCP Mission)

The CAA has been a member of the IRCP for a number of years. The ability to share information on projects and new initiatives with other ambulance services in the US, Canada, UK and Europe is invaluable. Each year the IRCP has a face to face meeting that can be attended by ambulance service representatives from around the world. Last year’s very successful meeting was held in Matakana in New Zealand and was hosted by St John New Zealand and the CAA. Participants enjoyed an interesting program with presentations from seven different countries.

In 2010 the IRCP meeting will be held in Vail, Colorado from the 9th-11th August and will link with the Rural EMS Summit which will be held from 11th-13th August. Further information is available on the IRCP website www.ircp.info or e-mail ircp@wecadems.com for any further information.

Australasian Events

*Rural and Remote Symposium*

The CAA Symposium will be held just outside Perth on Monday October 11th and Tuesday October 12th, 2010. It is anticipated that the program will include speakers, panels and break out groups to identify what are the most essential issues that must be progressed and outcomes to be achieved in the changing health environment.

It will focus on building relationships and partnerships to achieve more innovative and affective ways to support the effective health care of communities in the vastness of rural and remote Australia and New Zealand.

*CAA Convention*

The Convention will follow the Rural and Remote Symposium and will be held in Perth. The Convention will follow the 2009 format with day one of the Convention an extended Board meeting and day two of the Convention a more conference style format that will include health and emergency services specialists and as well as a broader range of participants.

*CAA Ambulance Awards*

The Ambulance Awards form an important part of the CAA calendar culminating in the formal Ambulance Awards Dinner that will be held on Wednesday 13th October, 2010. These Awards have been developed to acknowledge and encourage innovations from Ambulance Services throughout Australia, New Zealand and Papua New Guinea. They provide a platform for the industry to learn from each other and reduce duplication of effort.

There are four categories, Technical Capability, Clinical Capability, Operational Performance and Management Practice. Awards are presented for each category with the overall winner presented with the Star award. The closing date for submissions is the 21st July, 2010.

*ACAP Conference*

The CAA Rural and Remote Symposium and the CAA Convention links with the ACAP Conference to provide a week of high level presentations and discussion on ambulance service delivery and related topics.
Recent Activities

JEPHC Symposium

The second annual JEPHC symposium was held at the Monash University Clinical School (Alfred Hospital) in April 2010. With over 120 delegates attending the event from across Australia and New Zealand the event was focused on the advancement of the paramedic profession and the initiatives in advancing paramedic practice that are being undertaken.

Presentations were delivered by: Ian Patrick (ACAP President), Professor Peter O’Meara (Charles Sturt), Peter Carver (NHWT), Professor Frank Archer (Monash), Professor Ron Stweart (Dalhousie, Canada), Professor Peter Brooks (Australian Workforce Institute), Associate Professor Tony Walker (CAA), Professor Matthew Cooke (Warrick UK), Dr Jason Bendal (ASNSW), Dr Cindy Hein (SAAS), Gary Wingrove (IRCP), and Andy Long (Wellington Free Ambulance, NZ).

The 2010 David Shugg keynote lecture was delivered by Professor Peter O’Meara and focused on ‘Managing ambulance as a complex adaptive system’.

There was considerable interest in the presentation from Peter Carver (Executive Director, National Health Workforce Taskforce), when he outlined the current programs and funding events that are occurring as part of the overall commonwealth health reform agenda.

The revelation that Paramedicine was one of the groups that had been recommended for registration under the umbrella of allied health was also a considerable talking point.


Clinical Senate of Western Australia

ACAP President, Ian Patrick was invited to present on behalf of ACAP to the Parliament of Western Australia, Clinical Senate in Perth on Friday 26 March 2010.

The presentation was based around a request to explore opportunities for expanding interprofessional practice within the Australian context.

The potential for changing the scope of paramedic practice to support communities and their needs was a central theme in the presentation.

Targeting the appropriate scope of practice to patients at the earliest opportunity requires appropriate control, structured call-taking, and appropriate despatch models. Engagement of alternate service providers, integration of care, and supplementation of service where necessary by changing the paramedic scope of practice are all opportunities for improving community health through interprofessional practice.

National Council of Ambulance Unions

The National Council of Ambulance Unions, a national alliance group for all State and Territory Ambulance Unions met in March to discuss national professional registration for Paramedics.

The group expressed support for the long-standing ACAP drive for national professional registration for Paramedics and will finalise a draft document on the matter soon.

ACAP welcomes the union statement of support for registration and looks forward to fruitful discussions with this group and other stakeholders in the future.

NSW Inquiry

The NSW Legislative Council General Purpose Standing Committee No. 2 (GPSC2) Inquiry into the management and operations of the Ambulance Service of NSW (ASNSW), is still ongoing, with the latest review report released in April 2010.

The terms of reference for this latest review were:

That General Purpose Standing Committee No 2 inquire into and report on the implementation of the recommendations of the Inquiry into the management and operations of the Ambulance Service of NSW.

In January ACAP prepared a submission to the GPSC2 monitoring committee entitled Window dressing or real change based on member feedback.

In preparing the submission ACAP sought the views of more than 1000 NSW members and their perceptions of the organisational changes since the October 2008 Report of the GPSC2 Inquiry.

The confidential oral and written replies from the perspective of respondents drawn from different levels and locations throughout the ASNSW provided a deeper insight into the perceptions of change (or otherwise) within the Service.

These perceptions were not uniform and in some areas differed from formal policy views, pointing to possible misperceptions; continued workforce tensions and the need for better internal communications.

The GPSC2 report has incorporated some of the feedback provided by ACAP. ACAP will continue to take a proactive role in providing feedback and comment to the GPSC2.

Further details on ACAP’s submission to the Inquiry and links to the GPSC2 can be found on the ACAP website – www.acap.org.au (look in Publications/Submissions).
ACAP Restructure

The ACAP Executive (Board and Chapter Chairs) have continued meeting to progress the College restructure and work plan, and work is on track to achieve the restructure by 30 June 2010.

Considerable work has been achieved by the various working groups. The work of the Governance and Finance working groups have been referred by the Executive for legal opinion and auditor review. Progress is also still being made on the membership and branding areas with both still attracting considerable debate.

ACAP Website

The Board encourages everyone to have a look at the new ACAP website, and provide feedback through the online survey.

A considerable amount of work has gone into the new site, but to ensure it is meeting your needs we need your feedback. You can access the survey from the main home page.

There is a large amount of information on the new site, including News from the ACAP Board and State Chapters, an area for upcoming events (ACAP and non-ACAP), research opportunities and details for Response submissions.

For the first time the Winter 2010 Response edition will be available on the site for access by members.

The link to the new Paramedic Shop is also available on the site, so why not check out the latest editions and member specials at the Shop.

Additional Board Activities

As Response goes to print, in May, ACAP will meet with Minister Snowden, Minister for Indigenous Health, Rural and Regional Health and Regional Services Delivery to discuss:

- recognition by government of paramedic practice as a health profession (or AHP)
- inclusion of EMS in health care policy and funding arrangements
- need for rural incentives, scholarships and clinical training like other health professions, and
- independent national registration of paramedic.
Welcome to the ARC Representatives page in the Response. By the time you are reading this I will be locked in a meeting with the Australian and New Zealand Resuscitation Councils to review and prepare our guidelines in response to the resuscitation evidence being published in the C2010 Consensus on Science. The ARC and NZRC guidelines will be released in December 2010 following the publication of the Consensus on Science in November. As I am bound by a confidentiality agreement I cannot at this time publish any new work.

I have decided to present to you the current ACAP Position Statements on Defibrillation and CPR. You can review these statements, as we will. These statements will be reviewed by ACAP following the publishing of the Consensus on Science. These statements were produced after the C2005 review of the resuscitation evidence and released in 2006.

If you would like to provide any comment or feedback on these then I encourage and welcome any comments to director@nsw.acap.org.au.

AUSTRALIAN COLLEGE OF AMBULANCE PROFESSIONALS

POSITION STATEMENT

Public Access Defibrillation

Survival from out of hospital cardiac arrest in Australia remains poor with approximately less than 10% of victims leaving hospital alive.\textsuperscript{1,2} Factors which have been identified as those influencing outcome include the underlying cardiac rhythm, the early initiation of Cardiopulmonary Resuscitation (CPR) and early defibrillation.\textsuperscript{3,4,6} It has been over three decades since the potential of closed chest CPR to improve outcome following cardiac arrest had been demonstrated.\textsuperscript{7} Since then there has been great emphasis placed on training the general community in CPR in order to “save lives” following cardiac arrest.

The development of Automated External Defibrillators (AEDs) has made the concept of community based response feasible. AEDs have the ability to identify the underlying cardiac rhythm as to being either a “shockable” or “non shockable rhythm”. The specificity and sensitivity of the decision algorithm is 100%, that is it will never shock a non-shockable rhythm, and approximately 98.5%, correctly identifying a shockable rhythm, respectively.\textsuperscript{8,9} As such the potential for these devices to be used within the community, and possibly by the public, was established.

Recognising that there was now a major opportunity to further improve survival following cardiac arrest within the community, attention began to focus on how the delivery of “early defibrillation” could be achieved. This has been advocated by all resuscitation councils world wide. While numerous strategies were developed and trialled they can be categorised under the following headings:

- Emergency Medical Services: Defibrillation by ambulance service personnel.
- First Responder: Defibrillation by appropriately trained persons who have a duty to respond to medical emergency.
- Public Access Defibrillation (PAD): Defibrillation by undertaken by anyone trained or untrained

The evidence to date supports the premise that early defibrillation delivered within a PAD mode may improve survival following cardiac arrest which occurs outside of hospital and in public places. Accordingly it is acceptable that PAD programs be implemented wherever feasible adopting the following principles.\textsuperscript{10}

- Public Access Defibrillation represents an important link in the Chain of Survival for a person experiencing a sudden cardiac arrest. Any initiative in this area should promote the other links in that chain.
- Defibrillation should preferably be undertaken by trained lay people or health professionals. As trained personnel may not be available immediately, untrained bystanders should also have access to the use of public access defibrillators.
- Programs are needed to support the broader education of the Australian community in emergency response and cardiopulmonary resuscitation (CPR).
- Implementation of Public Access Defibrillation should be developed in partnership with local emergency medical services and provide for data collection and audit of events.
There is no data supporting the efficacy of PAD for cardiac arrests occurring in the home. Furthermore, this position statement only considers the efficacy and effectiveness of PAD in improving survival from out of hospital cardiac arrest and does not address the specific issues of implementation or cost effectiveness.

The Australian College of Ambulance professionals supports the implementation of public access defibrillation programs

CLASS OF RECOMMENDATION: CLASS B: Acceptable

LEVEL OF EVIDENCE: LOE II

Australian College of Ambulance Professionals

Position Statement

Cardiopulmonary Resuscitation

CARDIOPULMONARY RESUSCITATION – CPR

Cardiopulmonary resuscitation is the technique of rescue breathing combined with chest compressions. The purpose of CPR is to temporarily maintain a circulation sufficient to preserve brain function until specialised treatment is available.

The College states that rescuers should start CPR if the victim has no signs of life (unconscious, unresponsive, not moving and not breathing normally). Even if the victim takes occasional gasps, rescuers should suspect that cardiac arrest has occurred and should start CPR11. (Class A; LOE IV)

The College acknowledges that no human evidence has identified an optimal compression-ventilation ratio for CPR in victims of any age.11,12

Interruptions to compressions should be avoided with evidence suggesting that previous compression-ventilation ratios resulted in too much “hands off time”. (LOE IV) Evidence also demonstrates that over ventilation occurs even by trained responders.11

The College supports a universal compression-ventilation ratio of 30:2 (30 compressions followed by 2 ventilations). This is recommended for all ages regardless of the number of rescuers present. Compression must be paused to allow for ventilation.13

This is the Position of The Australian College of Ambulance Professionals.

REFERENCES:

Sagacious Australian paramedics have long argued for professional registration and the portability and mutual recognition of their knowledge, skills and experience across State and Territory borders. Despite the enormous benefits that such mobility brings, both to individuals and organisations, until quite recently this path has been littered with frustrating impediments and policed by obstructionists – clearly not a journey for the faint-hearted.

Those possessed of some degree of enterprise have, however, managed to jump not only State and Territory borders, but also to some extent, national and occupational borders – by seeking work with both public and private sector employers in a range of capacities including, but not limited to pre-hospital care.

As a profession, we have fought long and hard – though some would argue not long or hard enough – in our ongoing quest for professional recognition and registration. However, is it possible that an existent opportunity – an alternate road to a form of registration and job portability – has somehow been overlooked in the process?

On the 11th of May 1992, the Commonwealth and all Australian States and Territories signed an agreement relating to mutual recognition. The purpose of the agreement was to create a national market for goods and services and to establish a regulatory environment which encouraged enterprise, maximised a national market for goods and services and to establish a framework for the recognition of skills across Australia.

Subsequently, legislation enacting a mutual recognition scheme was passed by all Australian jurisdictions starting in 1992. New Zealand is also covered by virtue of the Trans-Tasman Mutual Recognition Act 1997 (Cth). The mutual recognition scheme applies not only to goods and services but also to occupations.

The effect of the legislation in force throughout Australia and New Zealand is, essentially, that people who work in a registered occupation in one jurisdiction can freely enter an equivalent occupation in other jurisdictions. Arguably, as paramedics, pre-hospital care providers, paramedic practitioners or whatever name we collectively select for the job we do, we are covered by this legislation.

Under the provisions of the Mutual Recognition Act 1992, a person who has a current authority to practise in a given State or Territory in an occupation such as paramedic, which is recognised as equivalent to an occupation in another State or Territory, is eligible to be registered and to carry on that occupation in the second State or Territory.

This right to registration is exercised merely by lodging a notice (in the form of a Statutory Declaration) stating that the individual is seeking registration for the equivalent occupation in accordance with the mutual recognition principle, paying the appropriate fees (if any) and supplying evidence of current registration in the original State or Territory. When working in the second jurisdiction, all regulations governing the conduct of the occupation in that State or Territory must be complied with e.g., in the case of paramedicine, this means that the current protocols or guidelines should be followed.

Mutual recognition offers an alternative avenue for obtaining occupational registration throughout Australia – that is, individuals have the choice of applying for “registration” under either the Mutual Recognition Act 1992 or under the relevant State or Territory legislation covering occupational registration.

After receiving such a notice, the local registration authority (i.e., in most cases in Australia, this would be the relevant State or Territory ambulance service) must grant registration to the individual within one month of application lodgement, with registration taking effect from the date of lodgement.

The authority may refuse or postpone the registration subject to the Act (e.g. if the applicant has made false or misleading statements or if the occupation is determined not to be equivalent), but if the authority takes no action, registration is deemed to have occurred within one month of the original application. Applicants for registration can apply for an Administrative Appeals Tribunal (AAT) review of any such decision and the AAT may make whatever orders it considers appropriate.

While other occupations such as lawyers, osteopaths and carpenters have used the mutual recognition road, I wonder whether any Australian paramedic has ever wandered down this path?

About the Author

Allison is currently an ICP with the ASNSW, having completed an ICP RPL program with that service from 2007-2008. Prior to this she worked for seven years as an ICP/Branch Station Officer with the Tasmanian Ambulance Service where she completed ambulance officer (paramedic) RPL before completing her intensive care training in 2003. She completed her initial IC paramedic training with the ACT Ambulance Service and is currently studying for her Masters in Juris Doctor at the University of Canberra.

Bibliography


References


2. The legislation defines “occupation” as “an occupation, trade, profession or calling of any kind that may be carried on only by registered persons, where registration is wholly or partly dependent on the attainment or possession of some qualification (for example, training, education, examination, experience, character or being fit or proper), and includes a specialisation in any of the above in which registration may be granted.” “Registration” is defined to include “the licensing, approval, admission, certification (including by way of practising certificates), or any other form of authorisation, of a person required by or under legislation for carrying on an occupation” (see for example Section 4 of the Mutual Recognition Act 1992 (Cth).

3. Section 16 of the Mutual Recognition Act 1992 (Cth) deals with the mutual recognition principle in relation to occupation and the ability of a person who is registered in connection with an occupation in a State or Territory to carry on an equivalent occupation in another State. Section 17 deals with entitlement to carry on an occupation and provides at s17(2) that the mutual recognition principle is that a person who is registered in the first State for an occupation is, by this Act, entitled after notifying the local registration authority of the second State for the equivalent occupation (a) to be registered in the second State for the equivalent occupation; and (b) pending such registration, to carry on the equivalent occupation in the second State.

4. See for example Section 18 of the Mutual Recognition Act 1992 (Cth).
Ziad Nehme, Director

You’ve been involved with SPA since 2006. What is all the hype about SPA?

SPA is truly unique. No other student organisation in the country works collaboratively with university societies and the profession’s peak body in order to boast an exceptional set of benefits for students. Underpinning these partnerships, we have a cohort of over 1,000 students nationally who are enthusiastic, responsive to change, and encouraging of the ideals that ACAP has strived to foster for many years.

Not only have we learnt to build a strong membership base, but we are also learning to take our own share of the pie. In some states, students now account for the largest proportion of ACAP members and these numbers are continuing to grow. In 2010, we’ve seen another two universities fall victim to our irresistible array of benefits. Student members from the University of Tasmania, both in Rozelle (NSW) and Hobart (Tasmania), join a further seven universities spread across the country, all readily engaged in the ACAP brand.

Greater than ever before we’re seeing the state ACAP branches getting actively involved with students, and we’re beginning to unravel greater resources for students in the way of continuing education, representation, funding and professional development. Of particular mention, the ACAP QLD Branch has been the first to lead this development with the election of a student paramedic representative to the branch committee. We welcome this proactive approach, and eagerly wait as QLD sets to deliver some great programs for students in 2010.

We’ve made so much noise to-date, but we’ve only just started. Our national student conference was a success, but we’re not stopping there. The feedback we’ve received is shaping the upcoming 2010 SPA Conference. We are working towards a bigger and better program, with fantastic speakers delivering those “sexy” clinical topics, and our huge prize raffle is here to stay! Work is underway to deliver a bigger and better convention for students and we hope that our 3rd SPA Conference will be home to over 300 students from across the country.

Moving forward, SPA will bring a focus on student research, learning through self-empowerment, positive community engagement, and the establishment of initiatives for students to unite in matters regarding the development of our profession. Work is underway to create a new national student website, while incorporating social networking mediums to enhance the networking opportunities for students across borders.

But perhaps the best way to answer the question “what is all the hype about SPA?” lies in a simple but powerful message – we are the future of our profession.

Owen Peake, Chair

Owen, you’re a Nursing/Paramedic double degree student who holds the top seat of the 2010 SPA Executive Committee. Why are you so enthusiastic about being a Paramedic, and what do you hope to achieve in your role as Chair?

My goal to practice as a Paramedic is rooted in my desire to assist members of the public no matter who they are or what help they need. I feel that as Paramedics we have a privileged role in the Australian healthcare system. Patients turn to us in their time of crisis, they allow us into their homes, and they allow us an intimate view into their lives. I am also drawn to the high acuity of our patients, and working in a challenging and dynamic workplace sets a personal goal for me.

I have a major role in charting the direction of SPA in 2010 by focussing the unique energies and strengths of the executive members into our objectives. There is a need for a national representative body for undergraduate paramedic students in Australia and I feel privileged to be part of that. I want to see SPA meet its objectives such as showcasing our National Student Conference and creating synergies between societies and their respective ACAP state branches.
Nicole Robertson, Web Editor

**SPA is currently working on its third website re-development, what was wrong with the first two?**

We want to produce a website that is professional and effectively conveys what SPA represents, which is something we felt previous designs didn’t do very well. We want the new website to be interactive and dynamic, as well as being a useful portal for students to access relevant information on events, research, news and other things like study tips and student research.

Interactivity is an important aspect of every website. Our previous two sites lacked this important component, and much time has gone into developing the new site to ensure our users find it a rewarding experience. We have also put time into researching popular websites, establishing a consensus on features that work and which ones don’t. Most importantly, we want the SPA website to be modern, dynamic and fresh, and we hope to continue developing it with student feedback.

In light of the recent launch of the new and improved ACAP website, we are eager to see the launch of the new site in the coming weeks.

Daniel Berhang, Secretary

**Student members are the future of ACAP. What can you tell us about the student members of the college, and why are they joining in 2010?**

SPA is a special interest group of ACAP. While SPA itself does not have membership categories, all student members are registered as student members of the College. In 2010, the membership is bigger and brighter than ever before. Over 1,200 student members and nine universities now participate in ACAP activities. The membership is made up of undergraduate and postgraduate students in both rural and urban settings. Of particular mention we welcome students from the University of Tasmania in Rozelle NSW and Hobart TAS who have contributed a humble membership base to our existing members.

Becoming a student member of ACAP brings with it some great benefits. These include, receiving the quarterly RESPONSE magazine, discounted tickets to the National ACAP and SPA Conferences, discounts at the online ACAP Paramedic Shop where you can buy textbooks, instruments and many other useful resources. Furthermore, as an ACAP member, you can attend regular professional development workshops to add to your paramedic studies. Most importantly, students who engage in the College activities are likely to build both personal and professional networks and gain a unique insight into the profession.

Kevin DeCosta, Community Engagement

**SPA is big on developing community networks and engaging students in community activities – how does this relate to student paramedics?**

SPA gets a lot of questions from students on ways they can volunteer, both in their local communities and internationally. As the interest already exists, SPA’s role is simple – help students access opportunities for them to get involved. That includes providing students with resources and up to date information on volunteer organisations, and also volunteering programs that may interest them.

Students can already see the importance for Paramedics to get involved in the community. As members of a multidisciplinary healthcare team, an essential part of our job as Paramedics is to advocate for the health of our patients. Not only is this about administering health, but also engaging the community through a greater awareness and education into health promotion. This is often a difficult task for students because community health issues are relatively foreign from a firsthand perspective.

To best serve our community we have to be able to campaign for equality in healthcare. To do this effectively we must be more acutely aware of the issues faced by those in our community by becoming more involved. The key to successful community engagement is empowerment. Empowerment of paramedics and the communities they serve. It is a privilege to be a paramedic, and if we are to continue to be genuine contributors to health care it is our responsibility to make the most of our opportunities to improve healthcare and its delivery in the community.

One of the programs you’re working on is helping “paramedic students save lives”. Can you tell us more about the Red Cross Club Red Initiative?

SPA is proud to be a part of the Australian Red Cross Blood Service Club Red blood donation program. Club Red is a blood donor program designed to encourage people from groups like SPA to give blood as a group and help save lives together. Over 26,000 blood donations are required each week across Australia to ensure there is enough blood for those who need it. It is estimated that 1 in 3 of us will need blood at some point in our lives but currently only 1 in 30 people give blood.

As a Club Red member, SPA groups across Australia are supporting this initiative and we are encouraging all eligible members to give blood. Every member who donates blood increases their local societies tally. The number of lives saved can be tracked on the Club Red website at www.donateblood.com.au/clubred. To make sure your donations count towards our group tally, simply join Club Red online and nominate for your donations to count towards your university society tally.

If you are interested in giving blood, please contact 13 14 95 or visit www.donateblood.com.au for more information.

Coco Giddings, Communications

**Communications is made up of a number of portfolios, how important is communications to SPA activities?**

Communications is hugely important to SPA – we can offer students a wealth of educational and professional opportunities and the more people that hear about us, the better! This year, we are expanding our communications portfolio to include a Facebook, Twitter, and a fancy new website.
The new and improved SPA website will include everything a student paramedic could ever need: news, research opportunities, upcoming events, and links to International Paramedic blogs, study and exam techniques, discussion boards, and tips for cooking with Mi Goreng noodles. We also look forward to seeing an increased SPA presence in Response Magazine.

Christian Winship, Publications

The role of publications is a new role to SPA in 2010, how is it going to impact SPA?

Publications will help develop initiatives that highlight the fantastic work that is produced by student paramedics around Australia. This work will also help to “spread the word” with regards to upcoming activities and initiatives which are being developed for student paramedics.

Through the use of Response as a vehicle, SPA will be able to reach out to students and inform them about events that occur within their local student club or society, and entice students to assist in shaping the future of Paramedicine. This year, in consultation with Coco and Nicole, we will aim to advertise SPA to the wider paramedic community through this section in Response, the SPA website, Twitter and Facebook.

Andrew Mitchell, Conference Organiser

Andrew, you’re creating discussion with your 2010 SPA Conference. What can students look forward to in July, and what plans do you have after it’s all over?

The SPA Conference 2010 provides an opportunity for student paramedics to come together and get extra insight into the future of Paramedicine. SPA Conference 2010 will give attendees access to exciting new content and discussions, delivered by leading health professionals.

The last SPA Conference inspired me to become part of the bigger picture, and it’s my hope that SPA Conference 2010 will create a light bulb moment for at least a few people, who will go on to become part of SPA in 2011. SPA provides an opportunity for students to shape the future of the college, and the SPA Conference 2010 is a fantastic way to light the flame.

My primary focus is to create a great SPA Conference 2010. I’m doing that by engaging with SPA members using things that you already have; the Web, Twitter and Facebook. Asking SPA members what they’d like to see at the conference will tune the SPA Conference 2010 to members needs. This might sound pretty simple, but it’s all about being responsive and providing students with real value for money.

After the conference is over, I’ll be moving my efforts towards developing programmes which address areas that SPA members want to know more about. There’ll be more surveys with great prizes coming your way soon. Keep an eye on the ACAP Student Paramedics Australasia Facebook and Twitter pages!

Pauline Murcott, Community Alliances

As a graduate with a wealth of knowledge and education in student volunteerism, what do you hope to achieve in your role with SPA?

Strengthening community alliances is a vital component of promoting community engagement within SPA and its stakeholders. SPA aims to develop its alliances and focus on strategies that engage paramedic students in community-based events such as charity support and volunteerism.

Volunteering provides SPA members with exposure to a diverse range of experiences and skills, in addition to promoting community mindfulness and goodwill. SPA members actively involved in these activities will be rewarded by developing key attributes including team work, accountability, responsiveness and creativity.

Fortunately SPA is continuing to be a proud supporter of Youngcare, which is an Australian based charity with the vision to “help create change in the way we care for young Australians with high-care needs”. Fundraising initiatives are currently being developed to double the amount of money SPA raised last year for Youngcare. I will endeavour to educate SPA members about the Youngcare organisation and their visions whilst fostering and embedding the importance of donating to this worthwhile charity.

My future endeavours for the SPA alliance portfolio are exciting, dynamic and provide a unique blend of opportunities to encourage SPA member’s to develop fundamental skills, whilst engaging with the community.

Rhiannon Evans, National Coordinator

Rhiannon, you’re all about students. You’ve volunteered for SPA since its inception and you were instrumental in developing the first paramedic student society for Flinders University. After so many years, what keeps you involved?

At times it can be a lot of work and can be incredibly stressful. At the end of the day seeing the societies put on successful events and having members rejoin the next year makes it all worthwhile. I have a passion for student development and empowering the students to realise their full potential. My role in SPA gives me the opportunity to facilitate this. I guess it comes down to being altruistic. There’s a definite sense of personal satisfaction and enjoyment from seeing the societies flourish.

I’d love it if we could support every society and give them the foundation to self-perpetuate. I moved from a local society role into a national SPA role with the hope of creating a strong identity and a voice for paramedic students. In my role as National Coordinator I support societies to network and increase professional development opportunities for their members.

There are societies that have grown and gone from strength to strength and their members receive fantastic benefits from this. I’m hoping that by assisting all societies to build support networks they are able to draw on one another’s experiences. This would then allow every paramedic undergraduate the opportunity to develop professionally and belong to a larger support network.
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Do you know someone like Russell, Katie or Lachlan?

**Russell** is a 9 year old boy who likes football, cricket and basketball. He lives at home with his mum and an older sister who smokes. He loves all animals and has a pet dog called “Charlie”. Russell over the last few months has been caught by his mum lighting small fires in and around the home.

**Katie** is always poking things in the fireplace, wanting to have aroma candles in her room and was just recently caught burning pieces of paper in her cubby. Katie’s mother is worried about her 5 year old daughter’s fascination with fire.

Meanwhile, 15 year old **Lachlan** set fire to grassland behind a vacant home causing property damage. He has been lighting fires on a regular basis over the past 12 months.

If you do, the Juvenile Fire Awareness and Intervention Program can help.

The Juvenile Fire Awareness and Intervention Program is:
- aimed at young people 4 -17
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For further advice or assistance regarding a juveniles firefighting or this program contact the JFAIP State Coordinator:

**Phone:** 1300 309 988
**Email:** jfaipoffice@mfb.vic.gov.au

Helping families solve the problem of juvenile firefighting
Special Feature

National Pain Summit

Key Points

The summit was an unprecedented gathering of over 200 leading authorities in pain medicine, other healthcare professionals, work safety, insurer, industry and consumer groups (e.g. the Consumer Heath Forum, Palliative Care Australia, Chronic Pain Australia, Australian Pain Management Association, Carers Australia and bodies representing people with chronic diseases such as cancer, arthritis, fibromyalgia, asthma, alzheimer’s, diabetes and multiple sclerosis).

Speakers at the Summit included four international pain experts:

• Dr Philipp Lippe, Chair of the USA National Pain Summit.
• Dr Mary Lynch, President of the Canadian Pain Society and Chair, National Pain Initiative, Canada.
• Dr Cathy Price, leading consultant in pain medicine in the UK who is leading a successful primary care based pain program for the Southampton Region.
• David Falconer, CEO of the Pain Association of Scotland.

Valuable ingredients from these countries’ programs have been incorporated into the strategy following fact-finding visits to key regional programs in the US, Canada and UK.

In addition, swimming great Kieran Perkins, spoke about his experience as a carer – his wife Symantha is a chronic migraine sufferer. And respected health economist and cancer survivor Helen Owens spoke from the perspective of one who suffers chronic pain.

There is a worldwide move by bodies such as the World Health Organization to improve treatment of pain. Australia is leading the way.

Some of the key priorities identified in the strategy are to:

• De-stigmatise the plight of people who suffer chronic pain.
• Boost the ability of the primary healthcare sector to deliver interdisciplinary care and support in pain management.
• Ensure better knowledge and education at all levels – for GPs and other healthcare professionals, the general community and people living with pain.
• Reduce the economic cost to individuals and the community of sub-optimal management of pain.
• Establish a national body with government, industry, consumer and clinical involvement to deliver agreed outcomes from the National Pain Strategy.

The summit was led by the Australian and New Zealand College of Anaesthetists (ANZCA) and its Faculty of Pain Medicine, the Australian Pain Society and Chronic Pain Australia in collaboration with inaugural supporters MBF Foundation and the University of Sydney Pain Management Research Institute.

Pain – Acute, Chronic and Cancer

The summit addressed three types of pain – acute, chronic and cancer pain.

Acute pain (after trauma/accidents or surgery)

Acute pain is effectively treated in only 50% of cases, yet 80% could be effectively treated. Appropriate, early treatment of acute pain reduces the risk of progression to chronic pain conditions. This is of great importance to the 10-50% of patients who, after injury or surgery, go on to have chronic pain.

Chronic pain (constant daily pain for three months or more)

• Affects one in five Australians – that’s 3.2 million people.
• Fewer than 10% of the 3.2 million people with chronic pain gain access to effective treatment, whereas in 80% of cases, chronic pain can be effectively managed if appropriate treatments are made available.
• Pain medication alone works in a minority of patients with chronic pain.

• “The High Price of Pain” report conducted by Access Economics for the MBF Foundation using PMRI data outlines the costs to the community of chronic pain. It can be found on the National Pain Summit website – www.painsummit.org.au. It found:

– Chronic pain costs the economy an estimated $34.4 billion per annum or $10,847 per person affected.

– More than 36.5 million working days are lost each year due to chronic pain, costing the economy and employers $11.7 billion annually in productivity losses and healthcare expenditure.

– Chronic pain is Australia’s third most expensive health condition (following cardio-vascular diseases and musculo-skeletal conditions).

– With an aging population, it is estimated that five million Australians will suffer chronic pain by 2050.

Cancer pain

• Cancer pain is effectively treated in just 50% of cases.

• Almost half of all cancer patients experience pain, while 80% at the “end of life” stage cancer patients are in pain.

• Cancer pain could be effectively managed in 90% of cases, if only the wide range of treatments now available were applied.
Representatives from professional associations, consumer groups and government met in Canberra on 11 March to review the draft National Pain Strategy and to recommend priorities for implementing the strategy objectives.

The Australian College of Ambulance Professionals was represented by Bill Lord from the Department of Community Emergency Health and Paramedic Practice at Monash University. The Summit was opened by the Federal Minister for Health, The Hon. Nicola Roxon MP.

The National Pain Strategy sets goals and objectives to improve patient access to appropriate and timely care for all types of pain, particularly chronic pain. Development of the strategy was led by the Australian and New Zealand College of Anaesthetists Faculty of Pain Medicine, with input from a diverse range of organisations and individuals with an interest in pain management.

The genesis for this meeting and the development of the National Pain Strategy arose from evidence of significant barriers to relief from pain. These barriers have been documented across most health domains, including emergency medicine and Emergency Medical Service or ambulance settings.

Given the extensive evidence of suboptimal pain management the mission of the Strategy is to “improve quality of life for people with pain and their families, and to minimise the burden of pain on individuals and the community.”

Pain is a complex phenomenon, and the perception and expression of pain is influenced by variables that include the context in which the pain occurs, social determinants, gender, prior pain experience, the individual’s sense of control over the symptom, and the consequences of the pain.

Pain can be acute – often associated with tissue injury or disease – but may also be chronic and exist without evidence of obvious pain-related pathology. Chronic pain may be difficult to manage, but its management is also affected by stigma regarding long term analgesic use and fears about drug addiction. In addition, effective management of complex pain syndromes may rely on access to specialist pain services, and these services are not widely available.

Chronic pain has a prevalence of approximately 20% in the Australian community and the cost to the community in terms of direct health costs and indirect cost such as lost productivity exceeds $34 billion per annum. Given the burden that unrelieved pain places on individuals, their family and carers, and the community, the Pain Strategy recommends that the optimal management of pain be declared a national health priority.

Almost 200 delegates met in Canberra on 11 March to review and prioritise the goals and objectives contained within the National Pain Strategy. The summit began with an eloquent and moving narrative from a person living with chronic pain. This was followed by an account of a carer’s experience of caring for someone with chronic pain.

These accounts highlighted examples of excellence in care, but these individuals also recounted episodes of inadequate care that resulted in needless pain and suffering. Areas of disparity in care were also highlighted, as well as wide variations in health provider attitudes to their complaints, with discounting of the patient’s symptoms and suspicions of drug seeking encountered on some occasions.

The National Pain Strategy aims to develop and implement practices that will lead to improvements in the care of all patients experiencing pain. Goals of the strategy include:

- Establishing relief from pain as a basic human right and national health priority;
- Empowering patients and carers with knowledge and confidence to seek appropriate information about their pain in order to better manage their pain;
- Enabling timely access to skilled medical, nursing and allied health professionals in order to provide optimal care of patients in pain using best-practice evidence-based guidelines;
- Involving interdisciplinary teams to provide coordinated care of patients in pain;
• Monitoring of pain management outcomes through the use of appropriate benchmarks;
• Research that aims to identify gaps in knowledge and practice and the translation of research findings into practice improvements.

International experts on pain management took part in a panel discussion mediated by Dr Norman Swan, with panel members describing initiatives in Canada, England and Scotland that represented best practice in the field of pain management. The delegates then formed small groups to discuss specific strategy goals with the view to finalising the recommendations of the Draft National Pain Strategy, prioritising objectives and developing implementation strategies.

Following the Summit meeting the recommendations from delegates will be incorporated in the final document. The National Pain Strategy is available at www.painsummit.org.au/strategy/Strategy-NPS.pdf/view

Paramedics play an important role in managing pain experienced by individuals in the community. Given the aging of the population and the association between ageing and chronic pain, it is anticipated that paramedics will increasingly encounter complaints of pain. While the management of acute pain can be effectively managed by paramedics, the assessment and management of chronic pain poses considerable challenges, and these stem from the complexity of the symptom, comorbidity, polypharmacy and opioid tolerance.

In particular, patients with chronic pain may have no obvious source of the pain, and be mistakenly viewed as a “drug seeker” when the patients behaviour may actually represent a legitimate desire to relieve poorly managed and unbearable pain.

In order to better equip health professionals with the knowledge and skills needed to assess and care for patients with pain the Strategy recommends educational strategies that include undergraduate curriculum design to integrate the study of pain management within each of the health disciplines. This recommendation is also highly relevant to paramedics.

The development of the National Pain Strategy represents a “world first” coordinated and multidisciplinary approach to improving the care of individuals experiencing pain. Paramedic practice should be informed by the Strategy recommendations, as these have the potential to enhance the quality of care for people with pain in community emergency health settings.

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References

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The “Gate Control Theory of Pain”, published in 1965 in the journal Science began a revolution of basic and clinical research that changed the way we think about pain. Until 1965, we had a “hard wired” concept of pain as being like a telephone cable system with electrical impulses running from the skin surface to the spinal cord and then to the brain where a bell was rung “when the pain arrived”.

The gate control theory proposed that pain could be “tuned in or tuned out” at a spinal cord level as a result of locally released inhibitory transmitters or, more importantly, as a result of powerful inhibitory pathways that descended from the brain to the spinal cord. Subsequent research extending up to the present day has confirmed these revolutionary ideas and built upon them, for example the finding that brain pathways and processes exist to facilitate pain processing at a spinal cord level.

The research findings helped to explain some hitherto very puzzling observations in humans. For example, Professor Henry Beecher, Foundation Professor of Anaesthesia at Harvard, carried out pivotal research on injured soldiers in World War II. He noted that soldiers with severe injuries often reported no pain at all immediately after the injury. Thus clearly there was not a “one to one” relationship between the injury and pain. In many cases he found the soldiers regarded the injury in a positive light since they would shortly be decorated and repatriated from the front line. He made the very thoughtful statement “it is not the injury per se that determines the pain, but also the meaning of the injury”.

Much more recent versions of this situation are the injured sportsman who manages to play on despite having a severe ligamentous injury or fracture. Thus even in so-called acute pain situations following surgery or injury the patient’s experience of pain will depend not only on the injury itself. Crucial also are factors within the individual and externally that impinge upon the brain and spinal cord. Subsequent research extending up to the present day has confirmed these revolutionary ideas and built upon them, for example the finding that brain pathways and processes exist to facilitate pain processing at a spinal cord level.

In order to make all health professionals aware of this profound change in thinking, the International Association for the Study of Pain (IASP) assembled an international multidisciplinary group charged with developing a definition of pain. The end result was as follows:

“Pain is an unpleasant sensory and emotional experience, associated with actual or potential, tissue damage, or described in terms of such damage.”

This definition makes it clear that pain is a subjective experience rather than just a sensation in humans. Thus all pain is an individual human experience that is entirely subjective and that can only be truly appreciated by the individual experiencing the pain. There are important limitations of the definition but most of which are encompassed in the footnotes provided with the definition Classification of Chronic Pain (IASP Press 2nd ed 1994). For example because of the subjective nature of pain in humans, it is difficult to apply this definition to neonates and to the elderly who have problems in communication and even more so to those with dementia.

Nevertheless over the last two decades epidemiological and “risk factor” research has provided very strong support for a strong body of pain behavioural research which underpins the “bio-psycho-social” model of pain. This model proposes that human pain is multi-faceted by its very nature and can be broadly described as comprising three components, namely a physical (“biological”) component which may involve nociceptive and/or neuropathic factors; psychological or even psychiatric factors; and environmental factors. This is an artificial separation since a significant number of such factors can operate across one or more of these areas.

Thus in order to comprehensively assess any patient suffering from any type of pain, it is important to assess the physical, psychological and environmental factors that may be operating. This inevitably may mean that more than one category of health professional will be required to make a full assessment. Also it may be necessary and even desirable for such health professionals to communicate with each other directly, in order to weigh up the relative contributions of the different factors that may be operating, thereby enabling selection of the most appropriate treatment or treatments in an interdisciplinary approach.

The advent of highly refined techniques for brain imaging has completely exploded older ideas about pain, with the demonstration that very diverse areas of the brain are activated in different ways in different patients experiencing apparently the same physical pain stimulus, but obviously very different contributions of psychological and environmental factors.

Major pain categories

Some confusion has arisen as a result of the misuse of supposed Latin and Greek derivations of words used for pain. Thus depending upon one’s ethnic origin, it would not be unreasonable to regard acute pain as being either severe pain or pain of relatively short duration. However throughout the world, there is now a convention of regarding acute pain as being “pain immediately following surgery or injury which is expected to be of relatively short duration”.

On the other hand chronic pain is conventionally regarded as being “pain that continues to be present more than three months after surgery or an injury or from various disease or other causes”. Cancer pain is the other major category and which can result in acute episodes, may be chronic or may be characterised as acute episodes on top of a chronic pain condition.

Finally there are certain episodic pain conditions which may be of limited occurrence or may be recurrent. An example in the non-cancer area would be migraine and an example in cancer patients maybe episodic pain associated with some of the cancer chemotherapy drugs.
It should be emphasised once again that in all of these categories, factors may be operating to a varying extent in the physical, psychological and environmental domains.

**Acute pain**

With respect to acute pain, in the large majority of patients the pain will gradually resolve as the patient recovers from the injury or surgery. However in recent years it has become apparent that even in the case of minor peripheral surgery such as inguinal hernia repair, at least 10% of patients will continue to have pain one year after the surgery which appears to be of a nerve injury type. In this situation, the pain is clearly not serving a useful purpose.

Thus one could regard acute pain as acting as a warning system and as such could be regarded as “good pain”. When the pain continues past the time of healing, or by convention for more than three months, it should be regarded as “bad pain”. A great deal of basic research, and more limited clinical research, has now provided pivotal new evidence of the processes that are involved at the periphery, spinal cord and brain which underpin the transition from acute pain to chronic pain.

Also clinical studies have revealed risk factors that operate during this transition, thus providing the important opportunity for preventive strategies.

**Chronic pain as a disease entity**

With respect to chronic non-cancer pain, much evidence now points to chronic pain becoming a “disease in its own right”. (Siddall, Cousins). In this concept, regardless of the underlying disease, injury or other event that triggers persisting pain, the pain itself is associated with physical, psychological and environmental changes that represent a distinct disease process.

This is an important concept since it draws attention to the fact that persistent (chronic) pain needs to be treated within the same framework as other chronic diseases, rather than regarding it as “only a symptom”.

A large body of basic research indicates that persistent pain may be associated with neuroplastic changes in the nervous system at peripheral, spinal cord and brain levels. One result of such changes is that the nervous system becomes sensitised and responds in an excessive way, not only to noxious stimuli, but also to non-noxious stimuli such as touch and light pressure.

This situation may be exacerbated by a relative deficit in the descending inhibitory system, due to excessive release of nitric oxide which can be toxic to neurons involved with the key inhibitory neurotransmitter gamma- amino-butric acid (GABA).

In the case of nerve injury at periphery, spinal cord or brain levels, the sensitisation process and loss of inhibition may be even more severe, with additional mechanisms playing a part. For example, at the periphery, there may be spontaneous firing at the point of injury of damaged neurons and additionally at the level of the dorsal root ganglion.

The neurotransmitters and growth factors associated with injury (the inflammatory “soup”) are responsible for sensitising the damaged tissue and markedly increasing spontaneous firing. This situation is associated with spontaneous episodes of neuropathic pain (paroxysms). If the peripheral process continues, there are progressive neuroplastic changes at spinal cord and brain levels. Thus a patient with continuing compression of a spinal nerve by a ruptured disc with leakage of disc material causing inflammation, may initially have neuropathic pain based solely on peripheral events but progressively neuroplastic changes occur in the spinal cord and then at brain level.

This is referred to as “centralisation” of neuropathic pain. This points to the desirability of early intervention if there are signs that a very localised neuropathic pain has begun to spread more diffusely in a lower limb or beyond that territory, indicating that spinal neuroplastic changes are occurring. This situation can be detected clinically by showing that sensitisation in response to a noxious stimulus which corresponds to the territory of the injured nerve (primary hyperalgesia) has spread to a more diffuse location in a limb (secondary hyperalgesia).

There may also be the development of a painful response to a non-noxious stimulus such as touch (allodynia). In humans it has proved difficult to document the extensive neuroplasticity changes which have been reported in animal models, however the availability of sophisticated brain imaging techniques have now confirmed that such changes do indeed occur in humans and are associated strongly with the pain that patients experience. For example Flor et al. reported that following amputation of the upper limb, the area in the primary sensory cortex representing the lip, expanded to take up some of the space previously occupied by the upper limb.

There also appeared to be some relationship between the degree of pain present and the neuroplastic changes. Furthermore fitting a bio-electrical prosthesis resulted in a reduction in pain and neuroplasticity. In patients with spinal cord injury and neuropathic pain, Wrigley et al. demonstrated neuroplastic changes in the sensory cortex which were not present in patients with spinal cord injury who were free from neuropathic pain, or in control patients with no spinal cord injury.

There was a strong correlation between the amount of pain experienced by the patients and degree of neuroplastic change. Maihofner et al. studied patients with complex regional pain syndrome and found a positive correlation with changes in the motor cortex and the abnormalities in motor function which are an important part of this complex painful condition.

In the psychological and environmental domains, there is ample evidence that there are important changes in patients with persistent pain that play a significant, and sometimes dominant, role in the ongoing experience of persistent pain and in the impact that the pain has on the individual’s quality of life.

For example mood changes such as anxiety and depression share neurotransmitters with chronic pain. Fear-avoidance behaviour is frequently associated with persistent pain and leads to a downward spiral of reduced activity, deconditioning, postural changes and loss of muscle support of various joints and also the spine.

In the environmental area, key changes in the individual’s relationship with key family members and those in the workplace can be crucial. For example the most important factors in determining whether acute low back pain progresses to a chronic phase are in the psychological and environmental domain rather than being in the physical area.
In summary, patients with persistent/chronic pain have a very wide range of ‘pain pathology’ which includes:

- Persistent, altered peripheral inputs
- Persistent dorsal root ganglion and spinal cord neuroplasticity changes which are: pathophysiological, neuroanatomical, pathological and genetic.
- Persistent thalamic, limbic system and cortical neuroplastic changes
- Persistent psychological and environmental changes

All of the above are maladaptive and represent a disease entity, irrespective of the primary disease that may have triggered the chronic pain. Quite recently it has become apparent that genetic factors (‘internal environment’) can determine responses of the individual to nociceptive and neuropathic stimuli. In a key study in humans Tegeder et al. reported that progression to chronic sciatica was determined by an enzyme controlling the release of nitric oxide.

In laboratory experiments it has been found that excessive amounts of nitric oxide can inhibit the production of the neurotransmitter GABA. Also a single gene which controls the sodium channel sub type NaV1.7 has been identified, which is responsible for the painful neuropathic pain condition in the limbs called erythromelalgia.

### Treatment implications of chronic pain as a disease entity

If persistent/chronic pain continues to be treated as a symptom the following issues arise:

- there may be an overemphasis on treatment of primary pathology, which may not succeed and this may result in a neglect of secondary and tertiary problems.
- Treatment of the primary pathology may be incorrect, for example,
  - Prescription of opioids long term in patients with predominantly psychological factors contributing to the pain.
  - Removal of all of the teeth in a patient with facial pain
  - An eight back operation for neuropathic pain in a patient who has failed to obtain relief from the prior seven operations

In contrast if persistent/chronic pain is regarded as a disease, the following approach is utilised:

- Identify and treat any primary pathology (eg replacement of an osteoarthritic hip)
- Identify and treat the secondary pathology (consequences of persistent pain eg CNS sensitisation, depression, fear avoidance behaviour)
- Identify and treat tertiary pathology (contributors eg environmental factors)

It will be clear from the above that it is often necessary to use a multi-modal approach to treatment. This will often require a team approach utilising healthcare professionals from different disciplines. It is rarely possible to completely abolish chronic pain although this can occur in the case of damage to non-neural tissue, with hip replacement being perhaps the best example.

On the other hand, various types of nerve damage appear to be capable of generating extensive central neuroplasticity changes as described above, which are very difficult to completely reverse with existing treatments, although improvements can be made. Nevertheless, regardless of the initiating event, be it nociceptive or neuropathic, a large majority of patients with chronic pain develop additional psychological and environmental changes which they are incapable of overcoming even if the pain does improve.

In order to emerge from this downward spiral, the patients will need multi-modal treatment which addresses physical, psychological and environmental factors. This important insight was gained by the founding father of pain medicine, Professor John J Bonica, who was charged with treating injured soldiers after World War II and recognised that he was incapable of achieving satisfactory outcomes unless he used a multi-modal approach, drawing upon a number of different health disciplines. This insight led Bonica to establish the first multidisciplinary pain centre.

It also stimulated Bonica to found the International Association for the Study of Pain, which emphasised the vital importance of communication among health professionals and between basic scientists and clinicians. Such interaction has resulted in an explosion of new knowledge at a basic science and clinical level and laid the ground work for interdisciplinary treatment of chronic pain.

### References


### CAP Program

**Complete the questions and collect your CPE points**

1. Pain is a subjective experience, with the perception of pain influenced by physical, psychological and environmental factors. This means that two patients with identical injuries may perceive and express their pain in quite different ways. List six factors that may influence an individual’s perception and expression of pain.

2. Gamma-amino-butyric acid (GABA) should be familiar to paramedics as the benzodiazepine class of drugs (eg midazolam); they work by enhancing the effect of GABA on GABAA receptors. Explain how GABA influences pain perception.

3. An injury or tissue damage associated with surgery may continue to result in pain long after the wound healing process is complete. Explain how some patients continue to experience pain after the injury has healed.

4. Clinical practice guidelines developed to enable paramedics to manage pain do not always discriminate between acute and chronic pain. How could the information in this article assist paramedics to better manage patients reporting an exacerbation of chronic pain?

Please remember that you need to retain evidence of your CPE point collection for up to three years for auditing purposes.

Thanks to Bill Lord for providing the questions
Paramedic (Level 3)

**PAIN CONTROL**

Pain is a complex phenomenon. Pain control should not rely solely on inhaled analgesics, morphine, and fentanyl. Simple measures such as reassurance, oxygenation, temperature control, splinting and posture contribute to pain control.

The aim is to reduce pain to a comfortable or tolerable level rather than complete pain relief, hence the term ‘pain control’.

The analgesic effect of morphine is maximal after approximately fifteen minutes and fentanyl after five minutes; however sedation may continue to develop for up to one hour. Be prepared for significant variations in individual responses.

The adverse effects of narcotics, particularly hypotension and respiratory depression, are potentiated by hypoxia, hypovolaemia, extremes of age and other CNS depressants.

2. **GUIDELINE**

**Basic care**

Methoxyflurane 3ml inhaled.

For adults with uncontrolled pain from musculoskeletal injuries or burns:

- Continue methoxyflurane
- Ensure systolic BP greater than 100mmHg and a stable GCS of 15
- Saline 0.9% IV KVO
- Morphine up to 2.5mg IV every 5 minutes or until pain is controlled to a maximum total dose of 10mg
- If morphine is unable to be administered give fentanyl 180μg IN
- If pain remains uncontrolled fentanyl 90μg IN and repeat if required after 5 minutes (maximum total fentanyl dose 360μg)
- If fentanyl is used submit fentanyl research data card.
- If pain remains uncontrolled, for other types of pain or paediatric pain:
  - If available arrange ICP clinical support. If unavailable develop a management plan in discussion with the EOC Clinician
  - Provide transport for further care.

Intensive Care Paramedic

**PAIN CONTROL**

1. **PRINCIPLE**

Pain is a complex phenomenon. Pain control should not rely solely on inhaled analgesics, narcotics or ketamine. Simple measures such as reassurance, oxygenation, temperature control, splinting and posture contribute to pain control.

The aim is to reduce pain to a comfortable or tolerable level rather than complete pain relief, hence the term ‘pain control’.

The analgesic effect of morphine is maximal after approximately fifteen minutes and fentanyl after five minutes; however sedation may continue to develop for up to one hour. Be prepared for significant variations in individual responses.

The adverse effects of narcotics, particularly hypotension and respiratory depression, are potentiated by hypoxia, hypovolaemia, extremes of age and other CNS depressants.

2. **GUIDELINE**

**Basic care**

Methoxyflurane 3ml inhaled.

For adults with uncontrolled pain:

- Saline 0.9% IV KVO
- Morphine IV PRN
- If morphine is unable to be administered give fentanyl IN according to the attached dose schedule and submit fentanyl research card
- After 10mg of morphine co-administer ketamine and morphine in equal doses i.e. for every 1mg of morphine co-administer 1mg of ketamine.

For paediatrics with uncontrolled pain:

- Saline 0.9% IV or IO KVO
- Over 2 years morphine 50μg/kg PRN
- If morphine is inappropriate give fentanyl IN according to the attached dose schedule and submit fentanyl research card
- Provide transport for further care.
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Early Goal-Directed Therapy for Septic Shock: a Systematic Review

Will Plewa

The following systematic review is devoted to ascertaining the impact of early goal-directed therapy on the mortality outcomes of patients suffering septic shock with reference to pre-hospital management.

Introduction

Medical treatment of septic shock reveals increasing incidence and steady mortality risks over the past several decades. The 2001 Rivers et al study was a landmark in this continuum; the ‘early goal-directed treatment’ EGDT protocol was developed in the context of critical care treatments and research. EGDT focuses on early and aggressive intervention to correct deranged haemodynamics. Rivers et al examined the impact of this protocol on mortality associated with septic shock and demonstrated a massive reduction. This has subsequently led to much controversy and discussion over the management of septic shock. Further studies comparing or implementing EGDT have also reported positive findings. The ‘Surviving Sepsis Campaign’ (SSC) was launched with international guidelines for managing sepsis including EGDT. Research into other factors that impact on sepsis outcomes have recently been discovered and now make up an integrated treatment approach including early empirical antibiotics.

Global hypoxia associated with sepsis occurs when, in response to an infection, the cardiovascular system collapses. The mechanism for peripheral vasodilation and suppression of myocardial contractility is poorly understood but the progression to global hypoxia is well documented. Insufficient venous return, from vasodilation, reduces preload and further hampers cardiac output compromising blood pressure and blood flow to individual organs, thus less oxygen is delivered. Global hypoxia results in anaerobic metabolism and this is detected clinically by a rising or high lactate. The progression from global hypoxia to organ failure and death is all but guaranteed without medical intervention to maintain perfusion pressure and correct oxygen debt by supporting the cardiovascular system in oxygen delivery.

Early intervention based studies have shown greater improvement in mortality outcomes when compared with similar interventions applied later, thus the treatment of sepsis has led to greater collaboration between emergency and intensive care medicine. It follows then, that optimised prehospital care will further streamline the care of sepsis patients. The goal of this review is to consider research undertaken by the medical community giving direction for paramedic practice and research in the future.

Systematic reviews are used to relate significant clinical findings with increased power, informing clinical practice with evidence based knowledge. They are important resources for practicing health professionals who may not have the expertise or time to evaluate research and yet need this process to be undertaken.
to inform and progress their practice. Inconsistency and omissions in the reporting of clinical trials further complicates effective evaluation. Systematic reviews address these constraints by evaluating and then critiquing the primary research of a certain area and reaching a conclusion based on the overall strength of evidence. The results of the critically appraised trials are then rationalised to clinical practice and knowledge base gaps identified for future clinically pertinent research.

Methods of the review

Search process

To obtain appropriate reports, online databases, online journals and reference lists of relevant articles were searched. Search online databases included Cumulative Index of Nursing and Allied Health (CINAHL), ProQuest 5000, United States National library of Medicine (MEDLINE), Blackwell Synergy, Science Direct, ISI Web of Science, Cochrane Library, Oxford Journals and Cambridge Journals. Indexed articles citing the study by Rivers et al were individually searched.

Search terms used in various combinations for narrowed searches included: septic shock, sepsis, severe sepsis, resuscitation, egdt, eq-dt, goal directed, sepsis bundle, clinical protocols, treatment outcome, survival, mortality, randomised controlled trial and controlled trial.

Results of the search

Articles from the searches were scrutinised before inclusion into the study. Inclusion criteria are identified in figure 1. The combined total of identified articles meeting inclusion criteria was twelve.

Critical analysis of study articles

To assist in the evaluation of the research articles, the CONSORT checklist was used to firstly record effective reporting and then determine the quality of study design. Reference to the CONSORT explanatory publication was made for this analysis.

Several studies failed to report undertaking a power analysis to determine appropriate sample sizes. The power analysis calculation determines the number of data needed to obtain statistical significance where the tested phenomenon exists. Therefore results from these studies have been considered with caution as rigour to achieve significance has not been taken.

Due control over important variables is more easily critiqued retrospectively with reference to the available body of knowledge. Thus, while some studies have not controlled all variables now considered important, this is not necessarily failure to apply rigour but possibly a finding that occurred as a result of or after the research was conducted.
Most studies did not fully report treatment methods. Unreported methods are inherently difficult when conducting a systematic review of clinical trials.

Randomisation and double blinding were not achieved in any one study, questioning the internal validity of studies as treatment bias may have confounded subsequent results\textsuperscript{17,18}. However this is less due to failure to apply rigour but primarily from inherent difficulties in testing a complete protocol.

**Thematic findings**

Figure 2 contains specific article details including: authors, study aim, sample size, year and mortality findings.

This section is divided into five sub-sections with the twelve studies included in the corresponding sections based on self reported study methodology. This division promotes ease of comparison and contrast.

Treatment methods and results will be discussed and shortcomings of studies will be listed. Studies are referred to by designed numbers correlating with listings in appendices and attachment to assignment.

**Randomised controlled trials**

A well designed and adequately reported RCT delivers high levels of evidence as selection prejudice and treatment bias are minimised\textsuperscript{14,19}. Two RCTs were discovered testing the impact of EGDT on the mortality outcomes of septic shock. Study 11 by Rivers et al\textsuperscript{2} is identified as the landmark study in implementing early hemodynamic optimisation for septic shock.

Both trials randomised the initial treatment of sepsis between an early goal directed therapy protocol and resuscitation at physician's discretion under existing organisational guidelines. Both trials established 'physician's discretion' to be standard medical practice and thus tested for an improvement from this, aiming to demonstrate an improvement over the current practice. Similar inclusion and exclusion criteria were utilised as well as the same method of achieving randomisation and sample size. Neither study was able to achieve blinding for authors due to inherent design limitations.

Study 12 by Lin et al\textsuperscript{22} attempted to replicate study 11 in a different setting and with demographic differences of a Taiwanese medical ICU compared to an American ED. Differences in admission pathway and primary site of suspected infection prevent a direct comparison due to their influence on achieved results.

Study 11 and 12 failed to report any adverse events reducing generalisation to clinical practice. Study 12 did not list mortality as a primary outcome or conduct a power analysis to determine appropriate sample size needed to achieve significant results. Study 12 also did not establish the blinding of bedside clinicians post-intervention or discuss seasonal differences in sepsis admissions as the sample was selected from a 6 month period.

Study 11 observed a reduction in mortality from 46.5% to 30.5%, while study 12 observed a reduction in mortality from 71.6% to 53.7%; results from both studies achieved statistical significance.

**Prospective Interventional trials**

Four prospective interventional trials were discovered; each assessed the effect on implementing an EGDT protocol for septic shock and analysing its subsequent impact on mortality. These trials aimed to assess the effect of implementing guidelines developed by the SSC\textsuperscript{5} or with reference to them and simultaneously identify and address operational issues\textsuperscript{24}. Randomisation was not possible with this study methodology and only partial blinding was achieved.

The four trials reported similar methods in their implementation of EGDT protocols. A multidisciplinary team collaborated in the development of the protocol with reference to available literature and then education programs were designed and delivered to bedside clinicians. Sepsis mortality was then compared to rates prior to education programs and once education had been completed. While a raised lactate level qualified for the enactment of the respective protocols, historical controls did not exist as lactate was not screened in patients with suspected infection, thus were not included in analysis.

Study 3, 6 and 7 were set in ED and study 1 was a hospital wide protocol. Study 1 initiated protocols for all types of shock while study 3 and 7 were limited to septic shock and analysing its subsequent impact on mortality. These trials aimed to assess the effect on implementing an EGDT protocol for septic shock.

Unlike the three other studies, study 7 reported mortality as a secondary outcome and neither study 3 or 7 conducted a power analysis. Study 6 conducted a power analysis but at a planned interval data analysis, the power analysis was recalculated with actual results and the sample size needed was four times the initial estimate and so the study was concluded at that time. Studies 1 and 6 modified statistical tests analysing data to reduce effect of confounding biases on results from lack of randomisation. Study 6 was the only to report adverse events.

All studies showed a decrease in mortality post-intervention, results from study 7 were significant, study 1 approached significance and study 6 and 3 were not significant. Study 3 was most closely replicated on study 11 Rivers et al\textsuperscript{2}, differing results may be explained by decreased mean age and lower incidences of blood transfusion.

**Retrospective Interventional trials**

The three identified retrospective observational studies were designed with a similar premise to the prospective observational studies except they were designed after the intervention had been implemented. These trials aimed to assess the effect of the EGDT based protocol and simultaneously identify and address operational issues. Randomisation and power analysis was not possible with this study methodology and only partial blinding was achieved.

All studies differed from the EGDT protocol used by Rivers et al\textsuperscript{2} in that EGDT was continued beyond the initial resuscitation timeframe. A multidisciplinary team collaborated in the development of the protocol with reference to available literature and then education programs were designed and delivered to bedside clinicians. Sepsis mortality was then compared to rates prior to education programs and once education had been completed.
While a raised lactate level qualified for the enactment of the respective protocols, historical controls did not exist as lactate was not screened in patients with suspected infection.

Study 13 reported a much higher APACHE II score revealing increased severity of condition which may be attributed to the admission of patients from the OR. Both study 10 and 13 included EGDT as a component of a total sepsis protocol. Comparison between studies is limited by being conducted in three different countries with documented differences in sepsis mortality attributed to demographics, climates and health organisational variances. Only study 2 sampled over a 12 month period.

With a generally smaller sample size and not identifying mortality as a primary outcome, mortality results from this subgroup carry less external validity and statistical significance, therefore results from this subgroup should be treated with caution. Study 2 and 10 did not undertake any statistical measures to prevent confounding biases. None of the studies established blinding by bedside clinicians.

Study 13 demonstrated significant reductions in mortality. Study 2 observed a trend towards mortality reduction. Results from study 10 were a non-significant slight reduction in mortality and authors attributed this to low baseline mortality. Suggested explanations for low baseline mortality were more effective organisational structures and educational programs.

**Observational trials**

Three observational trials were identified; focussed on determining the relationship between compliance with an EGDT based sepsis intervention and mortality. This study methodology operates with the assumption that EGDT improves mortality, but its use may further validate the SSC guidelines.

Analysis of medical records and laboratory findings were used to identify patients meeting protocol criteria then track treatment received. Authors determined if all components of the protocol were met and then compared data between compliant or non-compliant groups. All studies compared outcomes and treatments of these groups similarly.

Study 5 was a multicentre trial in England, while study 8 and 9 were American single centre trials. Study 8 was limited to ED while study 5 and 9 observed hospital wide protocols. To prevent the impact of confounding bias on findings study 9 randomised a selection of eligible patients and study 8 implemented statistical measures.

Study 5 did not report the use of statistical methods to prevent the impact of confounding bias on findings. The reviewed studies did not conduct power analyses or report mortality to be the primary outcome.

All studies observed a significant correlation between sepsis protocol compliance and reduced mortality. Study 8 tracked compliance with sepsis bundles over time and found increasing compliance. This was attributed to interval data analysis and follow-up with bedside clinicians regarding proper use of study protocol.

**Summary of findings**

Within subgroups a lack of study design heterogeneity and incomplete reporting prevents confident explanations of the disparity seen in rates and reductions of mortality.

Demographics of populations, patients and healthcare systems coupled with individual organisation guidelines for sepsis management and treating physician skill are attributed to the variance in baseline mortality and the EGDT attributed reduction in mortality respectively. However EGDT is at best, associated with an actual reduction in mortality. While all research demonstrates this trend only Rivers et al is able to deliver high level evidence, study methodology or failure to apply sufficient rigour prevent other reviewed studies. Mortality in septic shock is reduced by the implementation of EGDT but reductions will vary and cannot be confidently predicted.

**Discussion of findings**

**Limitations of the systematic review**

This systematic review does not represent an exhaustive synopsis of the available literature as only electronically available, English articles were reviewed. The author acknowledges other, potentially more accurate, conclusions could have been reached with the inclusion and analysis of these reports.

As the introduction of a standardised control treatment is the studied intervention, comparing outcomes from standard practice with a standardised goal directed protocol as a trial design, has inherent limitations as control groups cannot be accurately replicated. Standard practice varies based on organisational differences and physician experience and skill. RCTs however maybe considered unethical due to the confirmed trends.

**Controversies within the literature**

Supranormal cardiac index targets applied in several of the reviewed studies have been criticised, as inotropes are the primary treatment for improving CI. Inotropes are associated with greater oxygen demand and peripheral vasoconstriction, both side effects are tolerated to achieve a normal CI but are titrated to minimal use and are weaned off when possible. Best practice reveals that supranormal CI targets are contraindicated in sepsis management.

Blood transfusion of PRBCs to achieve a hematocrit of 30% in critically ill patients remains controversial. Conflicting evidence exists over the use of blood transfusions and other blood products routinely for severe sepsis. Inherent risks of transfusion reactions combined with the complex co-morbidities of a critically ill patient, such as one in septic shock, have been recognised by intensivists and led to more judicious use of this treatment. Criticism has been made of EGDT for its increased reliance on PRBCs and subsequently reluctance in the implementation of EGDT.

The Swan-Ganz or pulmonary artery catheter (PAC) has been a point of contention within the ICU community; while valuable diagnostic data are able to be calculated leading to the more effective use of inotropes and vasopressors there are associated risks with insertion, infection and removal of the PAC. Research remains inconclusive as conflicting data has been identified and its use is subject to physician preference and discretion.

Further research of EGDT management of septic shock through well constructed, large, multicentre RCTs is required to determine the impact of individual protocol components.
Implications for paramedic practice

The high mortality rate associated with sepsis and the reported impact of early intervention suggests that prehospital management is pivotal to patient outcomes\(^1\). Systemic inflammatory responses to an infection deserve special attention as they are further characterised by a likelihood of rapid deterioration into shock. By gaining appropriate intravenous access, determining origin of infection, minimising global hypoxia and oxygen debt, paramedics can streamline care assisting in the achievement of hemodynamic optimisation and therefore preserving life\(^1,10\). Many historically constructed studies identified that their results may have been affected by the educational programs for bedside clinicians associated with the introduction of their protocol. Increased awareness of bedside clinicians may have contributed to earlier recognition and prompt, effective treatment of sepsis associated with septic shock. Further study into this phenomenon and strive towards effective management of severe sepsis and septic shock: 2008, Critical Care Medicine, Volume 34, pages 17–60.

Significant additions to the paramedic body of research will be required before pre-hospital antibiotic administration, pre-hospital steroid administration and pre-hospital support of cardiac output trials obtain medical and organisational sanction.

Conclusion

This systematic review reveals that while the incidence of mortality associated with septic shock seems to be reduced by EGDT it cannot be effectively reviewed by a systematic review or analysed by a meta-analysis. The irreconcilable differences existing between studies prevent confidence about the actual impact of implementing EGDT for sepsis. Those responsible for evaluating the cost effectiveness of procedures and ways to best devote scarce resources, can consider this complex syndrome and implement institutional modifications accordingly. Without generalised quantified risk reductions the external validity of cost benefit reporting of studies is not easily applied to any setting. The current research available, as studied in this review, does not appear to fulfil this application for paramedic practice.

In conclusion, practicing health professionals should examine their practice to ensure that patient well-being and care is maintained at a high standard. Systematic reviews are an effective way to present findings when several studies have reported on a clinical topic. EGDT seems to reduce mortality associated with septic shock. Further study into this phenomenon will hopefully lead to a positive outcome for all involved.

References

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Edward, Janet and the Primary Response team!

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As an Ambulance Chaplain I have been called to the scene of many tragic accidents, suicides and cardiac arrests, to assist paramedics as they care for traumatised bystanders and grieving relatives. Often when I arrive there is a palpable sense of relief from the attending crew who will say to me, “thank goodness you’re here. We didn’t know what to say!”

As paramedics, you will be called upon to provide comfort and support to those facing some of the most difficult situations imaginable. You will be amongst the first to speak with parents who have lost a child or a wife whose husband could not be resuscitated.

You will stand alongside the families of those who have committed suicide or whose loved one has died in a tragic accident, and in those situations I know it can be hard to find the right words to say in the hope of bringing some comfort.

Therefore, I would like to try and provide some suggestions for how you can respond to people in their time of loss with words and actions that will communicate care and genuine support.

Signs and symptoms of acute grief

Before attempting to suggest ways of caring for those facing acute loss, it is important to remember that people who are confronted with the sudden death of someone they love will experience a range of substantial emotional, physical and cognitive reactions, which combine to form the experience known to us as grief.

When people lose someone they love, there is almost always an emotional response consisting of reactions such as numbness, sadness, agitation, frustration and anxiety. It should be noted that the intensity of this emotional reaction will vary from person to person.

Thus an absence of obvious emotion, or conversely, a heightened emotional response does not indicate the significance of the loss for the people involved.

This is principally because in the earliest stages of grief, the sufferer has not had time to process the meaning of the loss. Instead they are likely to be stunned or numbed by what has just occurred.1

In situations of sudden loss, you may also witness expressions of guilt heard in such statements as ‘if only I had done more’ to either prevent the death or to provide comfort to the deceased before their death, for example.

This guilt reaction can be internally focused or externally directed. It is therefore not uncommon for guilt to be expressed to the paramedic as anger at their inability to prevent the death from occurring.2

Since anger is such a distressing emotion to be faced with, it is important to remember that the emotional outburst you sometimes receive, is in most cases not the result of something you have done. Therefore, an attitude of understanding and forgiveness goes a long way towards mitigating this emotional response when dealing with people whose grief is raw.

Acute grief may also manifest itself as a physical response with symptoms such as tightness in the chest or throat, tremors, breathlessness, and muscular weakness.3

When confronted by these types of physical responses to grief, it is important to reassure people that these symptoms, whilst distressing, are normal and will diminish in intensity fairly quickly.

However, they may also be masking an underlying medical condition so it is important to assess people carefully to rule out other possible causes for the physical symptoms shown.

In addition to emotional and physical responses, several cognitive responses to acute grief may also be observed. Disbelief and confusion are often the initial cognitive reactions to the news of a death, especially in the case of an unexpected death.4

What will I say?

Caring for the relatives of those who die.

Rev. Paul D McFarlane, Ambulance Chaplain

Providing care for those left behind

As paramedics, you are in a unique position to care for those who have lost loved ones because of the trust and rapport that often exists during times of crisis. One of the best contributions you can make is to do your job well and with compassion. This will help to bring some order into an otherwise chaotic and out of control situation.

Research conducted by Fraser and Atkins has found that simple, caring behaviours are often the most helpful to those suffering acute loss.5 In their study they explored survivors’ recollections of what were the helpful and unhelpful activities carried out by emergency nurses after the sudden death of a loved one.

The following five activities should be noted as they were found to be helpful by at least 75% of those surveyed (The number of respondents who found this helpful is shown in brackets).

- Told of death in clear language (88%)
- Comfort measures provided (87%)
- Given information about the care of a loved one (78%)
- Allowed to view the body after death (77%)
- Gave them permission to express their grief (76%)

Rand (1993) in her work on caring for those with complicated mourning similarly was also able to suggest a number of simple insights that can really enhance the care of those who mourn.6

- Remember that you cannot take away the pain from the bereaved.
- Try not to let your own sense of helplessness prevent you from reaching out.
- Do not attempt to minimise the significance of the loss.
- Expect to receive volatile reactions from the bereaved.

-

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In light of these observations, you will often be in a position where you can significantly contribute to the wellbeing of those who are bereaved.

This can be done through applying some very simple interventions such as having a professional and calm attitude, using a reassuring voice, showing respect to the deceased and their family left behind and displaying a willingness to provide care even if you feel helpless or ‘don’t know what to say.’

You can also arrange to contact a friend or relative on behalf of the bereaved so that continuing care is available when you depart.

So… What can I say?

In essence, it is not what you say but how you say it that will make all the difference. In speaking with those who mourn, remember that simply and clearly helping them to know what is happening, why it is happening and what is likely to happen in the future will allow the person to feel more in control and may ease the path of mourning.

The following guidelines provide a helpful overview of how you can most effectively communicate in situations of acute grief:

- Give information a little at a time.
- Be guided as to what information the person can accommodate by supplying the information that they request.
- Be aware that they will have a lot more going on in their mind than they are able to communicate.
- Be comfortable with silence. They will need time to process information.
- Use short sentences and take a break between sentences.
- Constantly reaffirm that the person has understood what you have said, even if you have to get him or her to repeat the information back. For example, I’m very aware of how difficult that receiving this news must be to you. I am also aware that it may be difficult for you to take in every-thing that I have said. It might be really helpful for you later if I make sure that I have given you all the details correctly. Would you like to go through them with me again so we are both sure I haven’t confused you?
- Remember that there are some very important things that people want to know and you should answer as simply, honestly and sensitively as possible. For example, at the time of sudden death, the important questions for long term mourning may concern the dying of their loved one: Did they die quickly? Did they suffer? Was anyone with them when they died? Did they say anything about me? The thought of their loved one dying in pain, terror, or alone is more distressing for many people than the thought that they are now dead.

A few words of caution

In dealing with people during times of traumatic loss, it is crucial to stay in touch with your own feelings and emotional response. It is quite possible that you may have experienced similar situations and that you may identify with the situation of those who grieve. This is especially true when dealing with the death of young children, for instance, if you have young children of your own.

Sometimes the way we try and appear emotionally unaffected when dealing with difficult situations is by presenting a professional front. This can certainly be a useful strategy at times as it can help you continue providing care in situations that are emotionally challenging.

However, remember that none of us are bulletproof and the walls we build to protect ourselves emotionally will sometimes develop cracks as we confront cases that are personally challenging or bring back sad memories from the past. This is not a sign of weakness! It merely helps to remind us that we are human beings who care for others in difficult situations and sometimes being there for people when they hurt can take its toll on us as well.

That’s why it is good practice to try and take some time-out after attending an emotionally challenging or traumatic incident. Standing down for 15-20 minutes before going on to attend another case allows us the opportunity to stop and ‘catch our breath’. It also provides an opportunity to talk informally with other attending paramedics about what you have just experienced. Remember that attending traumatic incidents will certainly drain your personal coping resources; so don’t forget that Peer Support Officers and Chaplains are there to help support and reassure you when you have been to the tough jobs.

And finally…

It is important to remember that whilst you will do your best to care for people in their time of grief, you will not be able to give them their loved ones back or even do much to take away their pain.

In a sense as a paramedic, you are just one ‘cog’ in the wheel of care that this person will receive. Family and friends, doctors and nurses, clergy and counsellors may all have a role to play in the coming days.

However, what you will bring to those who mourn is an offer of heartfelt support and care that will be remembered forever. You may be one ‘cog’ in the wheel but as paramedics you have a wonderful opportunity to provide care that will be remembered and appreciated for a long time to come.

About the Author

Paul McFarlane has just completed a Master of Health Studies (Loss and Grief) and has been an honorary Chaplain with the Ambulance Service of NSW for 9 years. Paul worked as a Registered Nurse before becoming an Anglican Minister in 1998.

References

3. Ibid, 22.
4. Ibid, 23.
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Basic Defence for EMS Staff
A review of the ISR Matrix technique

Jerry Barrett

Looking around the room I had to ask myself “what the heck was I doing”? Here I am, a 45 year old Paramedic surrounded by a group of younger and fitter people all confessing to be serving military/law enforcement personnel, security consultants and sporty martial art types. We were all in sports gear and requested to bring boxing gloves and mouth guards. This was the moment I thought that I had put myself in a position that I may live to regret!

But wait; there are a few older people in the room; in fact there’s a 66 year old standing over there and a few others that have grey hair and were born in the same decade as myself, a strange mixture of people all here for the same reason; to learn a new skill.

“knowing others is wisdom, knowing yourself is Enlightenment” [LaoTzu]

Why do we need to know self-defence?

My wife tells me that it must be down to a touch of ‘mid-life crisis’ trying to relive a time when I was younger, fitter and serving in some of the worlds elite special forces as a tactical medic, but after much inner thought I realise that it is not why I am here. Anyone who works in the health care system is in danger of attack from the very people that we are trying to treat, this is summed up by Fernandes et al in their survey of 163 health care workers stating that “Violence in the workplace is a well-recognized concern for health care workers with most perpetrated by patients and, to a lesser extent, visitors. Substance abuse and psychiatric disorders are among the main factors contributing to violence in the emergency department”.

This is also a reality for EMS staff who are called to deal with potentially explosive situations every day, people charged up on alcohol, drugs or just pure emotion can be irrational and lash out at anyone close enough in a moment of madness.

To counter this threat there are short courses on “verbal judo’ to help pacify potentially violent situations, and these are invaluable tools to have; I have personally used these skills many times to diffuse an escalating situation.

During my time in the health care system I have also seen many attempts to train Nurses and Medical staff in self defence moves just in case the situation turns ugly and talking yourself out of it is no longer the option. I have seen numerous well intended efforts to teach these skills to a profession who have the ultimate aim of compassion and not of violence.

Most of the techniques taught in these classes are taken from Karate, Kung-fu or quasi military unarmed combat programs. I have no doubt that these techniques can be effective in trained hands but they need constant practice and training to be reactive or effective, without this they are at best just a distraction to the assailant but at worse they offer a false hope of inflicting a blow that will stop a charging bull only to find that you have now entered the affray as a combatant and thrown any moral ground of passiveness away.

To someone fuelled up on a cocktail of rage, drugs or emotion once this barrier has been breached then that person is ‘fair game’ to be slapped!

Even if a person attends a regular martial arts class it does not automatically turn them into a mean lean fighting machine, even Gichen Funakoshi the “father” of modern day Karate noted that “You may train for a long, long time, but if you merely move your hands and feet and jump up and down like a puppet, learning Karate is not very different from learning to dance. You will never have reached the heart of the matter; you will have failed to grasp the quintessence of Karate-do” [Joe Hyams].

The trouble is that this training does not simulate real combat, it does not get you ready for that explosive moment where the situation gets out of control and the fists start to fly. This is why I am attending this class, this is the reason that I intend to learn some basic skills that will help the next time I have a drunk launch himself at me and I have to react to avoid being king hit.

Another thing is that we need to look at the news and current political and legal system to appreciate that even when public servants get involved in trying to protect themselves in a possible assault they too can stand accused of assault, or using excessive force.

What may seem like an expertly delivered martial art technique in the heat of an assault, if captured on film and played in the cold light of day could seem like an act of aggression or excessive force and land the defender in court facing assault charges. This is why I have been looking for a system that can teach me to evade the direct impact of aggression and NOT attempt to fight it.
“You need to have been put under pressure of someone trying to tear your head off and know that you can deal with it and it’s not going to kill you” these are the words of a veteran police officer as he explains why he teamed up with Luis Gutierrez to develop a self defence system for law enforcement, military personnel and civilians called ISR Matrix.

What is ISR Matrix?

ISR stands for intercept, stabilise and resolve. Once combined this system is remarkably effective for avoiding a damaging blow to the head, neutralising an opponent and restraining or disarming them to effectively render them safe to deal with. What I believe it has to offer over every other system that I have worked with is the five basic techniques that form the ‘intercept’ part of the system, the techniques that allow us to avoid getting hit and allow us to get in the safest position next to a physical body intent on doing us harm…. behind them! Of course we never knowingly place ourselves in danger, our colleagues in the Police force are excellent at responding to our calls of assistance should we assess the situation and deem it too dangerous for us to go into. But hindsight is a wonderful thing, and there are times when a situation turns ugly without warning.

Devising a limited set of techniques that would apply in a variety of situations was a challenge to Gutierrez, the President of ISR Matrix. It was deemed essential, though, because most police, security personnel or civilians have a limited amount of time to train. Gutierrez settled on a small number of moves that can provide real world utility against all levels of threat, hence the ‘Matrix’ in the title. And, being modular the system is built from components and training methodologies that can work in virtually any combination.

Avoidance moves

The ‘4 point drill’ is taught as a ‘passive move’ to avoid any potential assailant from making hand contact with you. We have all been there, there are always those patients that get into your personal space and try to place their hands on you. This is not always a threat, and the need to react in a passive manner is invaluable so as not to escalate the situation, nor cause offence if it was done on an unintentional motive. We do not want to start using ninja type movements on the dear old lady that just wants to touch our arm as a mode of reassurance!

The Techniques

So what of the techniques that we practiced, why does this make such a good system for us traditional non-combatants? Do you have to be fighting fit?

Well I am a prime example of a ‘not quite as fit as I should be’ Paramedic, family life and a love of Red Wine have caught up with me and I must confess that my trips to the gym have eased off a bit. I was dreading a martial arts type of warm up drill, designed to stretch muscles in places that have long been forgotten or used...... but the warm up was the first move.

The Instructor

Our instructor was Dave, a man with a wealth of knowledge as well as being the ISR Matrix representative in Australia. Dave commenced his career in the Australian Defence Force in reconnaissance, force protection, leadership and instructional roles. Within the civilian sector, he has worked within Corrective Services, Police and in health care. Over the past 17 years he served in various roles including diplomatic protection, intelligence, riot squad, emergency response team, operational safety training and project management. Dave has an in depth understanding of the health care system as he has also worked as a training coordinator in health care and a number of his close family members are nurses. That made it so much easier to relate to the tales of drunken patients threatening violence to health care workers.

Dave specialises in Defensive Tactics instruction and although the Australian chapter of ISR Matrix International has been established less than 2 years, Dave has conducted a total of 15 public courses in this period for individual Police, Military, Corrections and Security Officers along with several courses for Government Departments.

After seeing with his own eyes the need for an adequate professional personal protection self defence system for those of us who are in the care giving role Dave is constructing a specialised short course to cater for health care workers, just teaching the basic protection and evasion techniques that we could use to get out of a violent attack or situation without having to engage with the assailant, a purely ‘get out of trouble’ course that is based on 5 basic techniques.

Avoidance moves

There are, however, many occasions that I can think of when a patient fuelled up on the normal Friday night cocktail starts grabbing at the sleeve, or just invading that small envelope of personal space that we need to develop to ensure our own safety. What the 4 point drill teaches is just a gentle method of deflecting their advances, but that can follow on to another technique called the ‘arm drag’ if required.
This drill is called the ‘4 point drill’ as it develops the movement from all 4 points of the body that may be invaded on the upper and the lower torso. It is designed to protect not only the physical body but also any equipment that we may carry such as personal radios on our upper body or mobile phones and shears on our belts. The drill is practiced by pairing up with a partner, it is soft and passive, yet effective. We change partners frequently to avoid getting too familiar with one person and also to train using different body types and shapes. This first drill is also used as an excellent ‘ice breaker’ as we are encouraged to talk to each other and introduce ourselves during the drill, to practice the time when you are using the verbal judo skills on someone yet still deflecting curious body contact that may well be a precursor for an attack. We learn the skill of multi tasking [something my wife tells me I can’t do] whilst not appearing to take an aggressive stance. This drill also warms up the body and after the first session I feel that I have been put through a mini activity.

“You and your opponent are one. There is a coexisting relationship between you. You coexist with your opponent and become his complement, absorbing his attack and using his force to overcome him” – Bruce Lee [Joe Hyams].

So the 4 point drill can be used on any occasion that we do not want to be touched, it is a brush off from physical contact and cannot be seen as an act of aggression by anyone.

But what if the assailant is persistent or their intent is clearly to grab you or a piece of equipment? Then we learn the next move in the matrix, the arm drag. This move can follow on from the 4 point drill as a fluid movement. It’s a method for seizing your assailants arm and guiding him away from the path he wants to follow, thus creating an opening for you to gain a better position by moving to the side or back, originating from wrestling.

This move has great potential for the person that lunges at you, it is still a passive move and one that cannot be seen as an act of aggression. This is vital as any aggressive move can be seized on by my bystanders or the potential attacker as an escalation of the situation. The arm drag simply diverts the direction of the assailant and places us in the safe zone away from any potential attack, it also gives us an opening to get away from the situation. The only physical connection that occurs is the initial brush off using the 4 point move and a light touch of the upper arm to redirect the body; it works so well yet looks so flaccid!

The ‘Seat Belt’ move is a fluid continuation of the ‘arm drag’ technique and only involves using the other hand to grab hold of the assailants hip and staying close to their back. Our head stays firmly attached to their back and effectively removes any part of us from danger. Quite simply this extension of the ‘arm drag’ movement takes us behind the danger zone of flailing fists or kicks and positions us firmly onto the back of the assailant. We become the unreachable itch that no attempt of manipulation can reach.

The secret of this technique is to stay close to their back, with our head pressed on to their scapular with one of our hands on their hip and the other just distal and inferior to their A/C joint; in that position we are safe from being grabbed and can also remain elusive to any attempt to grab us. This safe position can buy valuable time for assistance to arrive in the form of security or police.

**Evasive moves**

So the first two moves; the 4 point drill and the arm drag can be used effectively on any type of aggressive move whether it is a focused personal attack or an alcohol fueled lunge. But what if the assailant is all fueled up and ready to do some damage to whoever they connect with? What if there is no place to run, that you are trapped in a room with the patient who is uncontrollably aggressive or violent? Then comes the ‘seat belt’ maneuver. As a profession we are not trained to stand toe to toe with an attacker, nor do we have any routine training in neutralizing any attack as the police do.

So what better place to be when confronted with an aggressive attacker than behind them?

Again we practice this additional move in the class, switching partners to simulate attack from as many different body types as possible, from the large powerful build to the slim and slight frame. Once we have mastered these drills we line up one behind the other with one person facing a line of potential attackers.
In this practice each person stands in the way of multiple people all walking forward in a ‘zombie walk’ with arms outstretched attempting to walk through the person in front of the line. This practice installs confidence that these techniques work, and to maybe perfect our techniques if they don’t. Believe me having 20 people come at you in an aggressive pose intent on walking through you and being able to avoid them is a great confidence booster.

Another group practice is the circle; this is slightly more advanced than the line practice as it enhances our peripheral vision. One student takes their place circled by the other students in the group, in this practice the attack can come from any direction at any time. Sometimes these attacks are from multiple attackers in several directions, in which case we are taught to use the assailant that we have latched on to in a parasitical pose as a shield to protect us from attack, it works…..and although it will be rare for us to be in such a situation, we can now be assured that it will work for us if we need it.

So far we have been taught how to evade assault, and position ourselves in a safe stance behind the aggressor. Dave is constantly walking around and offering advice to us, or answering ‘what if’ scenario questions from the other students. He can draw on years of experience to back up his explanations and give examples to help justify the technique or provide the legality of using certain techniques.

It is obvious from our group that each individual has their own agenda to fulfil, their own set of encounters in which to relate to and the sharing of these experiences with the rest of the class broadens our perception of the roles of different professions in the class.

*For to win one hundred victories in one hundred battles is not the acme of skill. To subdue the enemy without fighting is the acme of skill*  
– Sun Tzu

**Protective moves**

What next? Do we permanently attach ourselves on the back of an assailant until help arrives? Well yes, maybe we do; however Dave explains that we also need an avenue of escape, a method to disengage from our position of safety without getting hit. This is where we use ‘The Dive’.

The fourth element of this ISR Matrix is called ‘The Dive’, it is a basic maneuver that consists of a two handed thrust of the arms whilst bringing up our arms to allow our biceps to protect the sides of our face and head. From the ‘seatbelt’ position we are trained to thrust our arms out aiming at the solid mass of the assailants scapular with both the heels of the hands to push the body away from us, and allow that moment to escape. Once linked with the other techniques of the ‘arm drag’ and ‘seatbelt’ this escape maneuver fits in so fluidly that it becomes one easy, but very effective, move.

To see it being practiced by other members of the group there is nothing aggressive in the entire movement, it simply looks like the assailant has missed their mark and stepped away. In a real situation, on-lookers will not see any aggression on behalf of the caregiver, no excuse to wade in and help their mate from what is sometimes mistakenly seen as an assault from a person in uniform. No, these simple moves provide no reason to retaliate and no provocation to escalate the situation and are ideal for those drunken lunges that occur when the situation has not yet turned overtly violent.

“A defensive war is apt to betray us into too frequent detachment. Those generals who have had but little experience attempt to protect every point, while those who are better acquainted with their profession, having only the capital object in view, guard against a decisive blow, and acquiesce in small misfortunes to avoid greater.” – Frederick the Great’s INSTRUCTIONS TO HIS GENERALS

The moves taught to us so far are great for those instances where we do not want to escalate the situation, or where the advance may be either unintentional or not overly aggressive. But what of that scenario where the assailant has full intent of landing a knockout blow, in causing injury to us. We have all been there, we are presented with a person sizing us up and ready for a fight, what do we do now?

**Defensive moves**

This is where the last, and most important technique comes into its own, the aptly named ‘Helmet’. This is one of the ISR Matrix primary defensive moves and serves to channel the flinch response into a default cover-up against strikes to the head and protect those areas of the head that will cause a potentially fatal blow.

To execute a helmet your lead hand comes back and cups the back of your neck with the elbow pointing forward. The other arm comes across the front of your head with your bicep tight against the side of your head.

The arm cupping the neck is bent along the side of your head with the upper arm and forearm protecting the side of your head and jaw, thus guarding your ‘knockout triangle.’ Gutiérrez says that if he had one thing he would teach a private citizen, this would be the chosen technique. This simple technique is the default cover-up position either before the blows start raining down on us or as a reflex movement if taken by surprise, it is taken from the contact sport of Muay Thai.

The knockout triangle is a term coined to describe those areas of the head that would lead to a fatal blow, the temple area, jaw and back of the neck. Simple protection of those points will form a level of protection to use to escape serious injury from an assault.

The Helmet move is practiced until it becomes second nature to us, it must as the next time we use it could be for real.
This is where the boxing gloves come into the training, unlike the potentially passive actions that would cause us to employ the arm drag, seat belt or dive, this technique will be used to protect us from a violent encounter.

Dave explains to us that the only way we will know that we are performing the correct technique is by being on the other end of a beating, and realizing that if the movement is performed correctly then it will protect us. Initially and in pairs we practice defending ourselves from light blows from the partners boxing gloves and then we repeat the same line drills as before, only instead of a zombie walking line of potential assailants we must now protect ourselves from arm swinging thugs with boxing gloves on, intent on raining blows to our head.

Once we have mastered that, we set about on practicing to use the Helmet in adverse conditions, this is the part I mentioned earlier where we all rehearse spinning on the spot to make ourselves dizzy and then leaning to cover up from a few unexpected light blows to the head from our partner. Next we close our eyes and wait for the blows to start coming before we instinctively cover up and protect ourselves, all very life like and all very real to life. How many have heard about colleagues who have been attending a patient when the suddenly get attacked from a bystander??

The last exercise is the ring practice, where one by one we take turns in standing in a circle, surrounded by the rest of the group who will take turns in attacking us with their gloves on and react by instantly performing the helmet move for protection.

Another example where the matrix of moves taught on the course is so fluid is when we are sick of getting a beating from our training partner we change our stance from the protection of the helmet and adopt the ‘Dive’ maneuver to push the attacker away, whilst still protecting our head and vital areas.

The Grand Finale is having the lights turned out and performing our moves in the ring, working from sheer reaction we realize that these moves work and if performed correctly we can escape from a possibly crippling assault with just a few bruises.

Summary

This course was worth the money, you do not have to be Danny Green or Bruce Lee to use the training. It has been designed for normal working people. Even the 66 year old came away from the course unscathed after some brutal attacks not to mention the flabby 45 year old paramedic who just wants a level of protection to use when the situation turns ugly.

I would thoroughly recommend this training to any health care professional who comes into contact with the general public, especially those that deal with mental disorders or substance abuse as these people can be unpredictable and violent. I wish to add that I paid for my training and am in no way connected to the training. It has been designed so use based on the same fluid concept as the defensive techniques that we learn on the basic health care course. Dave and the team can be contacted via http://www.isrmatrixaustralia.com or by mailing info@isrmatrixaustralia.com.

About the Author

Jerry has been a Paramedic for many years, working in conflict areas across the globe. He was an ‘arrest & restraint’ instructor in the British army a long time ago, but understands that as he gets older he must get ‘smarter’ in avoiding violent situations.

He currently practices Traditional Chinese Medicine whilst also working as an Occupational Health and Medical Response Coordinator for a remote mine site.
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NEW SOUTH WALES

The past 3 months have proven to be a busy period for ACAP NSW Chapter, particularly in relation to member activity in the areas of continuing paramedic education (CPE) and scholarship grants.

In March more than 50 members attended an informative CPE session focussed on the growing issue of falls in the elderly and the provision of prehospital care to this at-risk population.

Dr Jason Bendall from the Ambulance Research Institute (ARI) provided an interesting presentation describing the nature of elderly fallers, their interaction with ambulance and the impact of these patients on ambulance operations.

The April CPE evening saw over 40 members treated to an excellent presentation by Associate Professor Brian Maguire from Maryland University in the United States. A/Prof Maguire presented findings from his groundbreaking research into paramedic occupational safety and the hazards faced by EMS workers including assaults, sprains and strains, and vehicular accidents.

Senior Sergeant Peter Jenkins from the NSW Police Crash Investigation Unit also presented, discussing crash scene investigation and his unit’s interaction with other emergency services. These sessions were highly successful and are further evidence of the NSW Chapter’s commitment to providing members with interesting and relevant continuing education and professional development opportunities.

ACAP NSW has also been busy providing members with financial scholarships to support a range of personal and professional development opportunities.

For the financial year to date over $13,000 has been granted to members, assisting them to pursue a wide variety of ongoing educational and development activities including conference attendances, post-graduate university studies, research projects and PHTLS training courses.

For more information on the ACAP NSW continuing paramedic education program or the scholarship grants, members are encouraged to visit the ACAP NSW Chapter area of the ACAP website – www.acap.org.au/nsw.

SOUTH AUSTRALIA

Monthly clinical events

The last few months have seen some exciting educational events held in SA. Since February, as a way of providing added benefit to its members the SA committee has programmed monthly educational events until July 2011.

The program will become a standard part of member benefits with the committee meeting each February to plan and program the following year’s events. The events not only focus on clinical education but also general interest; the first cab off the rank was an obstetric session which allowed students and paramedics to refresh delivery skills and get up close and personal with a couple of fresh placentas. Other presentations have included a mass casualty night and a regional conference (one of three planned for the year). The monthly sessions are provided free to ACAP members and SPA students, with a nominal fee charged to non members. Conferences are subsidised for ACAP members.

Rod Kershaw ASM Scholarship

Each year one lucky ACAP SA member is awarded the Rod Kershaw (ASM) Scholarship, this scholarship allows the nominated member to undertake research either within Australia or overseas into an area that will provide a benefit to both ACAP and the SA Ambulance Service. The scholarship is awarded following an application and interview process; this year’s recipient was Chris Cotton.
Chris who is an Intensive Care Paramedic at one of the Adelaide Hills stations will visit a number of world renowned research institutions, attend a couple of major conferences and visit JEMS in San Diego. In between all this a number of ride along shifts have also been arranged.

Fellow elevations

As recognition of ongoing and sustained services to both ACAP and paramedic education, three members were elevated to Fellow, these were; Louise Reynolds, Cindy Hein and Richard Larsen.

This conference is a collaboration between ACAP, ACEM and CENA, and will build on the teamwork from the roadside to the hospital and beyond.

This unique, and bi-annual SA event is a must for emergency physicians, general practitioners, pre-hospital practitioners and nurses who wish to update their skills and knowledge with presentations, practical sessions as well as interactive tutorials and discussion events.

The conference will also incorporate the ACEM trainee research presentations. MOPS, RACGP CME category 2 points and ACAP CAP points apply.

Visit www.emergencyssa.org.au for details and registration.

Earlybird registration applies.
AUSTRALIAN CAPITAL TERRITORY

ACAP ACT hosts ambulance graduation dinner

ACAP (ACT) has continued its 20 year tradition of hosting a graduation dinner for students of the ACT Ambulance Service on Friday 19 March. This year saw 23 students receive qualifications ranging from Certificate III to Advanced Diploma.

The students were roasted and toasted by nearly 100 of their family, friends and colleagues in the elegant surrounds of the members’ dining room at Old Parliament House.

MC’s Rebecca Lundy and John Slater provided a very funny tribute to the students with their “Music Hall of Fame” and the “ASOVision Song Contest”. Kathy Leigh, Chief Executive of the Department of Justice and Community Safety, and David Foot, Chief Officer ACT Ambulance Service, congratulated the students on their achievements.

As in previous years, ACAP (ACT) presented the Dr John Potts Memorial Awards to the best Intensive Care Paramedic graduates, and the Most Outstanding Ambulance Support Officer (ASO) Award. In 2010, the Potts Awards went to Jen O’Connor and Leanne Hawking, and the ASO Award was presented to Ben Morey, ACAP (ACT) Chair, Toby Keene, congratulated the award winners and all graduating students adding, “ACAP (ACT) is proud to continue the tradition of hosting a night to honour ACT Ambulance students. It is a tribute to the professionalism and high standards held by the ACT Ambulance Service Intensive Care Paramedics and Ambulance Support Officers”.

This year’s graduation dinner was generously supported by DHS/ETT. Mr Tony Nelson from ETT and Mr Russell McRae from DHS were on hand on the evening to present the graduates with gifts they had donated.

Monthly Education Activities

ACAP ACT continues to provide regular education events, keep an eye on the website for information about activities, www.acap.org.au/act.

Congratulations to all the graduating students:

<table>
<thead>
<tr>
<th>Advanced Diploma of Paramedical Science (Ambulance)</th>
<th>Certificate III in Non-Emergency Patient Transport; Certificate IV in Ambulance Communications</th>
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<tr>
<td>Ben Hamlin</td>
<td>Mel Giuigni</td>
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<td>Rob Irvine</td>
<td>John Boel</td>
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<td>Lisa Maljevac</td>
<td>George McDermid</td>
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<td>Jennifer O’Connor</td>
<td>Shannon Millard</td>
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<td>Jennifer Pedvin</td>
<td>William Mundy</td>
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<td>Rebecca Snape</td>
<td>Catherine Sherwood</td>
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<td>Josh Mundy</td>
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<td>Joel Powell</td>
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Graduate Paramedic Programs at Monash

The Monash University Department of Community Emergency Health and Paramedic Practice (DCEHPP) offers paramedics a suite of programs delivered mainly off campus to complement and further develop upon their undergraduate studies.

Three programs of study are available:
1. Graduate Certificate in Emergency Health
2. Graduate Diploma in Emergency Health
3. Master of Emergency Health

Within each of these programs there are three clinical study streams available to students:
1. General Stream
2. Aeromedical Retrieval Stream
3. Emergency Preparedness and Disaster Health Stream

These streams of study have been developed to reflect the diverse range of specialties under the umbrella of Emergency Health. Students can improve their clinical practice and knowledge in the delivery of emergency health services by enrolling in a stream of study that matches their professional background and clinical learning needs and interests.

Further information about each of these courses can be found at:
http://www.med.monash.edu.au/pgrad/coursework/

Entry Requirements
Applicants are required to have completed a Bachelor’s Degree in Emergency Health, or equivalent. In addition, applicants wishing to undertake clinical practicum units will need to demonstrate current relevant health professional registration (or equivalent). Applicants without an undergraduate degree but with extensive relevant experience will be considered.

Application
Applications for admission should be received by:
The last week of June for Semester 2
The last week of January for Semester 1

Please refer to the Monash University direct online application website:

Further Information
Joanne Bigley
Administration Officer
p: 03 9904 4368
e: joanne.bigley@monash.edu

Ingrid Brooks
Head, Graduate Coursework Programs
p: 03 9903 0690
e: ingrid.brooks@monash.edu
AUSTRALIAN CAPITAL TERRITORY

ACT ICP’S Recognised as Health Professionals

ACT Ambulance Service (ACTAS) Intensive Care Paramedics (ICP’s) have been recognised as Health Professionals by Fair Work Australia.

The decision, brought down by Commissioner Deegan on 29 March, follows a prolonged campaign by the Transport Workers’ Union (TWU). ACAP (ACT) contributed throughout the campaign by drafting of definitions and descriptors of ICP work, as well as tendering witness statements.

The decision means that ACTAS ICP’s will be reclassified from Technical Officers to Health Professionals. ICP’s are now recognised as belonging to a profession in the ACT, an important step on the road to professional regulation.

ACT Minister for Police and Emergency Services, Mr Simon Corbell said: “This is a very important milestone for the ACT Ambulance Service, and sees Intensive Care Paramedics (ICP) recognised for the professional job they perform in our community,”

In making the decision, Commissioner Deegan determined that ICP’s “…critically think, appraise, judge and act independently in novel and complex situations.” Also, crucial was “the fact that ICP’s have an increasing body of specialist knowledge, are working in a multi-disciplinary and integrated health care system, and are required to exercise clinical judgement.”

The strong membership of ACAP (ACT) was critical to the outcome. According to Commissioner Deegan, “…evidence also described the role of the Australian College of Ambulance Professionals. … This evidence was particularly relevant to the resolved issue relating to recognition as a profession.”

ACAP (ACT) Branch Chair, Toby Keene, congratulated the TWU on a well fought campaign and lauded the efforts of ACAP members, particularly Steve Mitchell and Therese Moore. Mr Keene said, “All ACAP members should be proud of the role they played in achieving this fantastic outcome.”

NEW SOUTH WALES

‘Access for Life’ workplace awareness campaign

The Ambulance Service of New South Wales (Ambulance) has launched a campaign supported by WorkCover to address this issue, which potentially affects hundreds of employees on a daily basis.

The ‘Access for Life’ workplace awareness campaign has been rolled out across the state. The campaign informs NSW workplaces of the appropriate steps to take when faced with a medical emergency at work.

The campaign, which includes a Medical Emergency Plan Poster is now available to workplaces across NSW and outlines key information to adhere to in the event of a medical emergency:

The campaign seeks to:
• Prepare employees for a Triple Zero (000) phone call, citing questions that Ambulance Call Takers are likely to ask in the event of a medical emergency.
• Encourage employees to call Triple Zero (000) and request an Ambulance when confronted with a medical emergency at work.
• Inform employees of key steps that can be taken prior to the arrival of an Ambulance, steps which will assist Paramedics to safely access and treat the patient in the shortest timeframe possible.

Ambulance Service of NSW Chief Executive, Greg Rochford, urged organisations to adopt a proactive stance in preparation of an adverse workplace incident.

“If workplace’s can streamline their emergency response procedures and adopt recommendations suggested in our Medical Emergency Plan, lives can potentially be saved - and the severity of workplace injuries can be significantly lessened.

“The introduction of this important resource will encourage a high standard of workplace safety across NSW. Preparation is of paramount importance when responding to a medical emergency at work,” Mr Rochford said.

When asked about the greatest challenge faced with workplace incidents, District Manager Paramedic Brian Parsell said “any initiative that reduces the time to access the patient benefits the patient. Workplaces need to be especially aware that whenever possible, the call back phone number provided to the Triple Zero (000) Ambulance Call Taker should be located as close to the patient as possible to ensure accurate updates on the patient’s condition can be provided if required.”
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Looking Back…Ambulance History

Ambulances from days gone by

The following images give some insight into how the ambulance has changed. Thank you to Mike Taylor for providing the photos and stories. Mike’s family has a long history with the ambulance in NSW, his story (printed in the Summer 09/10 edition) showed their family dedication with his father working on the ambulance, and five of six brothers (including Mike) also joining the service.

1960 FB Holden – Young

The car in the image, is a 1960 FB Holden Station Wagon. This car was purchased with the assistance of the Apex Club of Young. These cars were very common as ambulances in most states. It was not exactly a high speed machine, but was very comfortable on long distance transfers. This car was in service for about 10 years.

1964 EH Holden – Young

The car in this image is an EH Holden, purchased in 1964. My late brother, Peter, who was also an Ambulance Officer and builder by trade did the conversion of this panel van. Dad said that it was typical of Peter’s work, first class with exact attention to detail. Unfortunately I do not have an interior photo. My brother John, who was also an Ambulance Officer and Motor Mechanic, put the lights, siren and badges on the car. This was a very fast car (when required) and very comfortable on long distance transfers. Like the FB Holden, it was a single stretcher ambulance and also used for local work. This car was decommissioned in the early 70s.

1938 Hudson 8 and 1960 FB Holden – Young

The cars in this image are the 1938 Hudson 8 and the 1960 FB Holden. This print was taken at Young in about April/May of 1961 just before the Hudson was pensioned off.

1949 Ford – Harden-Murrumburrah

This image is of a 1949 Ford, which was based at the Harden-Murrumburrah Branch Station of the Young District Ambulance. This was the first ambulance stationed at Harden, which started as an Honorary Branch in about 1950 till it was made permanent in 1965. This car was in service for 15 years and was replaced by the 1965 International in the next image. Like the 1951 Ford at Young, it was built by W.S. Grice of Summer Hill in Sydney.

1969 Ford F100 – Young

This car was the last ambulance that dad put into service in March 1970 before he retired in July 1970. It was the first “official” white car at Young, the FB Holden was painted white instead of ambulance cream and we often wondered how he got away with it.

He told me years later that he received a “Please explain” from the Ambulance Board in Sydney, so I guess he didn’t. The Ford F100 was built by Bodycraft of Geelong and set up to take four stretchers and was used in the first year on road accidents.

This was the biggest ambulance that we had ever seen and to work in it was a dream come true.


The cars in this image were the fleet at Young in the mid 1960s; they are from left: 1960 FB Holden; 1964 EH Holden; 1951 Ford and 1963 International. I do not have an individual photo of the last car. It was set with three stretchers for road accidents. We used the three stretchers plus one or two back up cars on many occasions. My brothers and I worked out of all these cars including the 1951 Ford. It was in service till mid December 1969.
**JUNE**

Allied Health and Rehabilitation Seminar
ITIM
18 June 2010
Homebush Bay, NSW
Web: www.itim.nsw.gov.au

**JULY**

20TH IUHPE World Conference on Health Promotion
*Health, equity and sustainable development*
11-15 July 2010
Geneva, Switzerland
Web: www.iuhpeconference.net

**AUGUST**

Injury 2010
*New Zealand Trauma Services*
5-6 August 2010
Auckland, NZ
Web: www.adhb.govt.nz/trauma/

**SEPTEMBER**

8th Australian Conference on Safety and Quality in Health Care
*Back to the Future – Unlocking the potential*
6-8 September 2010
Perth, WA

2010 International Nurse Practitioner/Advances Practice Nursing Network Conference
*Advances nursing practice responding to changing environment: creating opportunities, enhancing services and maximising outcomes*
8-11 September 2010
Brisbane, QLD
Web: www.rcna.org.au/conferences/INP_apnn%202010/welcome

Australian Health Emergency Coordinators Conference
*Resilience – in the face of adversity*
16-17 September 2010
Eveleigh, NSW

AHHA Congress 2010
*Multiple dimensions of healthcare*
22-24 September 2010
Adelaide, SA
Web: www.sapmea.asn.au/conventions/ahha2010/

PHAA 40th Annual Conference
*Public health in a 21st century society: new ways of knowing, doing, living*
27-29 September 2010
Adelaide, SA
Web: www.phaa.net.au/40thPHAAAnnualConference.php

**OCTOBER**

Precious lives: global collaboration in stillbirth and infant death
*ISA and ISPID Joint Conference*
8-10 October 2010
Sydney, NSW
Web: www.isaispid2010.com

ACAP Conference 2010
*Clinical Leadership*
14-16 October
Perth, WA
Web: www.acap.org.au

2010 Annual Scientific Meeting on Intensive Care
*Australia and New Zealand Intensive Care Society (ANZICS) and the Australian College of Critical Care Nurses (ACCCN)*
14-16 October 2010
Melbourne, Vic
Web: www.intensivecareasm.com.au

Global Community Engaged Medical Education Muster 2010
Flinders University and Northern Ontario School of Medicine
18-21 October 2010
Barossa Valley Resort, SA
Web: www.sapmea.asn.au/gcmem2010

**NOVEMBER**

Trauma 2010
*Annual meeting of the Australasian Trauma Society (ATS) and the National Trauma Research Institute (NTRI)*
19-21 November 2010
Melbourne, Vic
Web: www.trauma2010.org
New life-like manikins that cry and convulse give paramedics a taste of real world emergencies

In the face of increasing demands on newly graduating emergency medical professionals, medical educators are turning to new life-like manikins that simulate human trauma symptoms to improve the practical skills of new graduates.

In line with the broader national trend toward more realistic health-related education, Australian hospitals and nursing colleges have started to take delivery of the new high fidelity patient simulators known as “SimMan3G”. The manikin can simulate a wide range of life-like human reactions including crying, convulsions, fever, hypertension and cardiac arrest.

This new simulation technology means that medical training institutes and nursing colleges can deliver practical learning opportunities in a safe environment that allows mistakes to be addressed in a positive manner.

The Federal Government has recently made a number of announcements regarding ongoing support for simulated learning environments and other medical education innovations.

As part of its investment in infrastructure to support the training of the future health work force, the government announced $175.6 million investment in capital infrastructure, “including funding for the construction of new and mobile high-tech simulated learning environments”.

Dr Richard Morris, Director of Anaesthesia at St George Hospital (NSW), says simulation technology is the “way of the future” in medical education and it will start to have a major impact on medical and nursing education once these additional funds start to trickle down to training providers.

“We’re talking about technology that can improve response times, increase confidence in health and emergency workers and overall save the lives of those people who need urgent, high quality help,” said Dr Morris.

SimMan 3G: “Real life” emergency training simulation

The wireless technology and improved mobility of devices such as SimMan3G, mean that training for paramedics is also starting to use simulation technology more.

The manikins are designed to help healthcare personnel experience real-life clinical scenarios and test their responses under pressure. They have eyes that move, airways that can become blocked, a pulse that can change quickly, a nervous system that can go into convulsions and a respiratory system that can go into arrest.

To see a “real life”, emergency training simulation using SimMan3G visit http://www.laerdal.com/simman3g/movie/
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Help make ambulance work safer – Complete the research questionnaire

Available at: http://userpages.umbc.edu/~maguire/Fulbright; or use the link on the ACAP website. Many of us have thought for years that ambulance work is particularly dangerous. But because of a lack of research on the topic, we have had a very difficult time convincing people outside the profession that this is a hazardous job. As a result, much more work is needed to help make ambulance work safer.

We are beginning to learn just how dangerous this work really is but we still do not know much about the causes of the high rate. Just like taking vital signs and a patient history before we can treat a patient, research must be done to determine the reasons for this high rate before interventions can be developed, tested and implemented.

Dr. Brian Maguire has been awarded a Fulbright Scholarship to study occupational risks among ambulance personnel in Australia. This research builds upon his previous studies and aims, ultimately, to develop lessons learned and best practices that can be used to help protect the lives and health of emergency services personnel across Australia and around the world.

Dr. Maguire’s extensive studies of occupational risks among ambulance personnel were the first to document the high rates of injuries and fatalities in the U.S. Brian is a former New York City paramedic and is currently a faculty member and administrator in the emergency health services program at the University of Maryland.

Les Hotchin, FACAP, Secretary of the Australian College of Ambulance Professionals (ACAP) says: “ACAP supports this important research initiative by Dr. Maguire and urges all paramedics to participate in the survey”.

All Australian ambulance personnel are invited to participate in this important research. Participants are asked to complete an on-line questionnaire related to occupational risks.

A short version of the questionnaire takes about five minutes to complete. The full version of the questionnaire will take about 15 minutes to complete.

The survey is available at: http://userpages.umbc.edu/~maguire/Fulbright; or use the link from the ACAP website, under Research Opportunities.

Contact Dr. Maguire if you have any questions.
Brian J. Maguire, Dr PH, MSA, EMT-P
Clinical Associate Professor
Department of Emergency Health Services
University of Maryland, Baltimore County
1000 Hilltop Circle
Baltimore, MD 21250
maguire@umbc.edu
http://ehs.umbc.edu
http://userpages.umbc.edu/~maguire

Call for application for KJ McPherson research grants

Applications are open for the KJ McPherson Education and Research Foundation grants. These grants are open to QAS officers to apply for research funding to conduct a project to improve patient care, as well as professional development.

There are various opportunities available:
- The Patron’s Research Grant is for $15,000 for an innovative project in the areas of clinical, educational and operational systems.
- The Dr Peter Stephenson Overseas Study Grant is for $5,000.
- The QAS Research and Development grants are $3,000.
- The QAS Professional Development grant is $1,000.
- The ACAP Scientific Poster Grant is $2,000.

Applications close on 10 September. Application forms can be downloaded from the internal DES portal, or contact Althea Cleland at acleland@emergency.qld.gov.au.
A leading Canadian paramedic educator has joined the teaching staff of the pre-hospital care programs of the School of Biomedical Sciences at Charles Sturt University (CSU) in Bathurst.

Mr Joe Acker, a former Operations Director of Emergency Medical Services (EMS) from Alberta Health Services in western Canada, says his passion for the development of EMS leaders is what brought him to Bathurst.

“Charles Sturt University is very well respected around the world for delivering exceptional paramedic education, and I want to be part of the team to develop a world-class leadership program for EMS,” Mr Acker said.

The Professor of Paramedic Practice and Leadership at the CSU School of Biomedical Sciences, Professor Peter O’Meara, welcomed Mr Acker’s appointment, saying, “We are very happy to have been able to recruit a paramedic leader of Joe’s reputation to Charles Sturt University. He will complement the knowledge and skills of our existing staff and strengthen our already strong links with Canada.

His enthusiasm for the development of leaders in ambulance services is particularly welcome as we are introducing a new course in leadership and management for paramedics next year.”

Professor O’Meara said Mr Acker has over 20 years experience in pre-hospital care in the state of Alberta where he worked as a rural, urban, and critical care paramedic, paramedic educator, General Manager of the Shock Trauma Air Rescue Society (STARS) helicopter program, and Chief of EMS for the City of Edmonton.

Mr Acker has international teaching experience in Brunei, as well as consulting in the United Arab Emirates, and has presented at a number of clinical and leadership focused conferences in Canada and the United States. His research focus for his Master of Arts in Leadership (from Royal Roads University in Victoria, British Columbia) was the development of a leadership competency profile for senior managers of pre-hospital care systems.

During his first year teaching the paramedic program at the Northern Alberta Institute of Technology in Edmonton, he received the prestigious Instructional Excellence Award. “I have always loved teaching and working with students,” Mr Acker said.

“For an EMS system to be successful, it requires skilled, compassionate, and professional paramedics on the front line. I have had some great mentors, and I believe I have learned lessons throughout my career that I can share with others. I am very excited to be here at Charles Sturt University where I believe I can contribute to improving EMS systems from Australia to Canada and everywhere in between.”

For further information about the School of Biomedical Sciences at CSU visit http://www.csu.edu.au/faculty/science/biomed/; and information on the new course in leadership and management can be viewed at http://www.csu.edu.au/courses/postgraduate/ems_leadership/index.html.
Responding to global needs

A partnership between East Timor’s Ministry of Health, the Order of Malta and the Ambulance Service of Timor-Leste is responding to the growing needs of Timor’s paramedical sector.

Following 10 years of independence, the government, the people and communities of East Timor remain committed to rebuilding their nation. Developing infrastructure and establishing vital services, such as a national ambulance service, are central to these efforts.

The Ambulance Service of Timor-Leste was established in 2001. The organisation’s 72 ambulance drivers, nurses and administrative staff are dedicated to delivering quality services to the nation and continually improving their response to community needs.

For the past four years, the Order of Malta has supported the efforts of Timor’s Ministry of Health to achieve their overall goal of strengthening the country’s health systems. In 2007, this commitment to Timor led the Order to establish a partnership with the Ambulance Service of Timor-Leste to support its vision to professionalise its services.

According to the Order of Malta’s Lieutenant Colonel Anthony Heath, the Order’s work with the Ambulance Service of Timor-Leste has been supported by Ambulance Victoria, the Australian Catholic University and Australian Volunteers International.

“Through various partnerships and relationships, the Order of Malta is assisting the Ambulance Service of Timor-Leste to achieve its goals. Activities have included conducting a needs analysis, developing a training program and funding a Timorese delegation to come to Australia for a fact-finding mission.”

Now the Order of Malta is working with Australian Volunteers International to recruit an Ambulance Service Adviser for an 18-month volunteer placement with the Ambulance Service of Timor-Leste.

“To improve the services of the Ambulance Service of Timor-Leste we have recognised there is a need to build the knowledge, expertise and skills within the organisation,” Lt Col Heath said. “To do this we are working with Australian Volunteers International to recruit an individual that can provide support, advice and assistance to enable the Ambulance Service of Timor-Leste achieve its own vision.”

South Australian Ambulance Service, Manager – Patient Services and former AVI volunteer Trish Vogel believes Australian paramedics can make a major contribution to strengthening health systems in developing communities.

Training and strengthening services were a priority of Trish’s volunteer placement with ProMedical (Vanuatu Emergency Services Association) in Vanuatu.

While Ms Vogel admits there were a range of challenges to working in a developing country, she found the rewards of her 18-month volunteer experience far outweighed the hurdles.

“I worked with colleagues that had an overwhelming desire to continually improve the services that were available to communities throughout Vanuatu. They would work to achieve this in an under-resourced and under-funded environment. It made me realise how much we take for granted in this area of work in Australia.

“Through the relationships I developed with my colleagues and in the health sector in Vanuatu, I was able to support their efforts to overcome the challenges of working in a struggling health system.”

From the delivery of training to staff and paramedic students to writing funding proposals or mentoring to developing a partnership between the Australian and Vanuatu paramedic sectors, Ms Vogel’s work responded to a range of needs.

“I do feel an enormous sense of satisfaction in what I achieved at ProMedical. However, the main thing I took away from the experience was an overwhelming appreciation of the work and dedication of my colleagues and communities to driving change in their lives.”

Australian Volunteers International is now recruiting for an Ambulance Services Support Officer to work with the Ambulance Service of Timor-Leste.

For more information visit www.australianvolunteers.com or contact AVI Recruitment Consultant Sean Lynch on 1800 331 292 or slynch@australianvolunteers.com.
Every Paramedic student knows the facts. Whether you’re in your first year or forth, at some point, you have attended a lecture and heard the following: if you believe that as a Paramedic, your job will consist of racing, lights and sirens, to six-car pileups and cardiac arrests, you’ve been watching too much television.

In reality, Code 1 calls will make up less than 40% of your workload, and you will be able to count the number of trauma patients you see in a year on one hand.

Australia’s epidemiology has changed dramatically in the last decade; our ageing population and the subsequent increase in the number of individuals living with chronic illness and co-morbidity, has caused a shift in community expectations of the Ambulance Services.

Though Ambulance will continue to provide a vital emergency medical service, the Extended Care Paramedic programs being trialled in several Australian States indicate that Paramedics will also be involved in the delivery of locally targeted, highly integrated, community health care.

Just as the ‘Ambulance Driver’ evolved into the Community Based Emergency Health Professional, the Paramedic discipline itself is on the brink of major change, and as the future of the profession, we have a responsibility to keep up.

It was fitting then, that the Second Annual JEPHC (Journal of Emergency Health Care) Professional Symposium adopted the theme ‘Doing Things Differently’.

Held on the 8th of April at the Monash Clinical School in the Alfred Hospital, the Symposium featured a host of local, interstate and international presenters.

It was great to see a large contingent of students in attendance; the new generation of Paramedics clearly understand the importance of professional development and are interested in more than just completing assignments and focusing on their university studies.

The first session of the day focused on the evolution of Ambulance in Australia. Professor Peter O’Meara of Charles Sturt University delivered the David Shugg keynote lecture, “Managing Ambulance as a Complex Adaptive System”, and Professor Frank Archer of Monash University discussed various service delivery models of community-based emergency health systems, and the national drivers for change.

The key message seemed to be that Ambulance Services should be dynamic, adaptive and responsive to the needs of the community it serves.

Ambulance in Australia has changed markedly since its inception, and continues to do so, so we must be prepared to change with it, taking responsibility for our own professional development.

We also heard from Mr Peter Carver, the Executive Director of the National Health Workforce Taskforce, on the Federal Government’s recent health reform. Of particular relevance to students were his comments about the allocation of adequate funding and resources to clinical placement programs.

As he suggested, student experiences of clinical placements are highly dependent on the enthusiasm of their clinical instructor, and it is promising that steps are being taken to ensure that health care students are provided with appropriate, high quality placements.

The remainder of the day was dedicated to exploring Paramedic role expansion in numerous national and international contexts.

This included a presentation from Professor Ron Stewart of Dalhousie University in Canada on the Community Paramedic program in Nova Scotia, which highlighted the importance of providing an Ambulance Service that is tailored to meet community needs.

Closer to home, Dr Cindy Hein of the SA Ambulance Service detailed the promising results of the recent trial of the Extended Care Paramedic Program in Adelaide. The program was beneficial for patients as it provided them with tailored care and patients could be treated in their homes, reducing the disruption that is associated with an unnecessary trip to hospital.

It also facilitated collaboration between Paramedics and other health care professionals to ensure the most appropriate care was delivered. Dr Hein reported that the Intensive Care Paramedics involved in the program enjoyed the work and were excited about the new career pathways available to them.

Students are now beginning to understand there is more to being a Paramedic than memorising CPGs and understanding various patient conditions.

The Second Annual JEPHC Symposium allowed students to consider the various ways in which Paramedic practice is evolving and the opportunities that may be available to them in the future.

After speaking to fellow students, the majority felt that the Symposium was worthwhile and are thoroughly looking forward to next year.
In Review

Book Review  By Mark Mastanduono

Cases in Pre-Hospital and Retrieval Medicine
By Daniel Ellis, Matthew Hooper

A new book by two leading Intensive Care and Retrieval specialists and other noted contributors with extensive experience in current international and Australian retrieval services and practices. It explores examples of real world cases in the pre-hospital and retrieval medicine arenas complete with high quality photos and descriptive clinical illustrations.

There are cases specific to areas with particular themes such as pre hospital care, clinical discussion in retrieval and pre hospital medicine (including paramedic skills) and ‘service development and special circumstances’. The last category highlights the importance of Crew Resource Management, originally developed to prevent aviation accidents, which is increasingly being used in medicine to use collaborative team input to produce safe, best possible outcomes in an expeditious manner.

The relationship between the retrieval team, pre hospital providers and other emergency services is explored and discussed in terms of team dynamics with the retrieval service as an extension of, and part of the pre hospital team.

The book covers clinical, operational safety, logistics and scene management considerations for all pre hospital medical providers including retrieval staff. Dot point checklists are suggested for examples in all categories and present logically structured sequences for approaching and managing what may be highly chaotic, confusing circumstances on initial approach, and dealing with complex clinical problems in the out of hospital environment.

Importantly it provides insight into retrieval service functioning and its unique role in complementing pre hospital care from the initial response through to arrival at the tertiary care facility.

An excellent and thought provoking read, highly recommended.

Publication Details

Cases in Pre-Hospital and Retrieval Medicine
Daniel Ellis and Matthew Hooper
Churchill Livingstone, Elsevier
ISBN: 9780729538848
$AUD 79.96 (RRP including GST)

Book Review  By Chris Cotton

Resuscitation of Patients in Ventricular Fibrillation from the Perspective of Emergency Medical Services
Paul Baker and Hugh Grantham

This book is a precis on resuscitation of patients in ventricular fibrillation (VF) from an emergency medical services (EMS) perspective. It gives a snapshot of historical elements of resuscitation and then moves into demographics and theoretical mechanisms for VF. It has a good, technical discussion of the evidence from the 2005 CPR Guidelines, especially studies surrounding CPR and defibrillation. This includes an interesting discussion around which should occur first – CPR or defibrillation, which is not surprising since one of the authors Paul Baker was lead author and the other was a co-author on an Australian study that looked at patient outcomes when CPR was applied before defibrillation in VF cardiac arrest.

The value of this book is that in 60 pages it provides an in-depth evaluation of the evidence and discussion of proposed models for VF cardiac arrest, while citing more than 200 references, which makes it a useful resource for looking at all those studies we may have verbally quoted or heard over the years but not been able to remember the references for!

The book concludes with a comment on future directions for VF cardiac arrest management. I would recommend this book as an interesting overview of the evidence to date surrounding VF cardiac arrest from an EMS perspective. It runs faithfully to its title.

Publication details:

Resuscitation of Patients in Ventricular Fibrillation from the perspective of Emergency Medical Services
Paul W. Baker and Hugh J. M. Grantham
Cardiology Research and Clinical Developments Series
New York
ISBN: 9781608766680 (softcover)
$AUD43.00 (RRP including GST)
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Supporting Ambulance Professionals
Ambulance Service Medal Recipients

Once again, the Australia Day honours saw a number of Paramedics and Ambulance Service Professionals receive the Ambulance Service Medal in honour of their work and achievements to the profession.

The following ACAP members were recipients of this award for 2010.

**Mr William James BARGER
ASM MACAP**

As a senior clinical manager with Ambulance Victoria, Mr Barger has made an outstanding contribution to the development and provision of ambulance services in Victoria, particularly through his exceptional service in the mentoring and development of ambulance staff, in the provision of education and clinical leadership, and in the development of clinical risk and patient safety programs to enable the delivery of the highest level of ambulance-based clinical care across Victoria.

**Ms Lucinda CLARKE
ASM MACAP**

Ms Clarke has served the community of the Queensland and the Queensland Ambulance Service with distinction since 1995. As a trained and qualified Intensive Care Paramedic, she has held several appointments including Officer-in-Charge duties and as Clinical Support Officer, and various management roles in the Brisbane Regional Office, the Queensland Combined Emergency Services Academy and the Combined Ambulance and Fire Communications Centre at Spring Hill, Brisbane. Of particular note is Ms Clarke’s long-term commitment to the education of ambulance professionals.

A qualified teacher, Ms Clarke has shown a passion for training and mentoring her colleagues, and has participated in the training of both professional paramedics and volunteer ambulance officers. He has positively influenced many volunteer officers and played a significant part in the quality of ambulance services being delivered in a number of country locations.

In 2007, Mr Callaghan undertook different assignments with the St John Ambulance Industrial Paramedic Service.

These assignments, in addition to the normal paramedic duties, involved conducting a first aid room, the use of additional medications and wound closure and suturing. Not only did Mr Callaghan carry out these duties professionally and effectively but he also contributed significantly to the development of these particular roles.

Throughout his career he has shown a passion for training and mentoring his colleagues, and has participated in the training of both professional paramedics and volunteer ambulance officers. He has positively influenced many volunteer officers and played a significant part in the quality of ambulance services being delivered in a number of country locations.

In 2007, Mr Callaghan was promoted to the position of Manager Metropolitan Operations. His ability to influence the provision of ambulance services positively has been demonstrated by his ability to make decisions in a constantly changing environment, by his ability to be accountable and by his outstanding ability to manage personnel.

Mr Michael William CAMERON
ASM MACAP

Mr Cameron is the Regional General Manager, Barwon South West, with Ambulance Victoria. He has made an outstanding contribution to the development and provision of ambulance services in regional Victoria. His demonstrable creativity and the ability to influence change positively within Ambulance Victoria and to key stakeholders are reflected in his being frequently sought out to implement new initiatives to benefit Ambulance Victoria and the community. In particular, he has provided significant innovation and leadership in the development of continuous improvement initiatives despite considerable industrial, economic, cultural and organisational challenges.

**Mr Desmond Louis CALLAGHAN
ASM MACAP**

Mr Callaghan joined St John Ambulance in Kalgoorlie in 1981. During his 17 years’ distinguished service in Kalgoorlie, his contribution to ambulance services was outstanding; in particular, his willingness and initiative to develop improved training for volunteer ambulance officers lifted the quality and standard of patient care in the region. He played a major role in ensuring a harmonious working relationship between career paramedics and volunteers, and was admired by the volunteers for his support and mentoring skills. Following his transfer to the metropolitan area in 1998, Mr Callaghan undertook different assignments with the St John Ambulance Industrial Paramedic Service.

These assignments, in addition to the normal paramedic duties, involved conducting a first aid room, the use of additional medications and wound closure and suturing. Not only did Mr Callaghan carry out these duties professionally and effectively but he also contributed significantly to the development of these particular roles.

Throughout his career he has shown a passion for training and mentoring his colleagues, and has participated in the training of both professional paramedics and volunteer ambulance officers. He has positively influenced many volunteer officers and played a significant part in the quality of ambulance services being delivered in a number of country locations.

In 2007, Mr Callaghan was promoted to the position of Manager Metropolitan Operations. His ability to influence the provision of ambulance services positively has been demonstrated by his ability to make decisions in a constantly changing environment, by his ability to be accountable and by his outstanding ability to manage personnel.
This program aims to empower women to succeed in both their personal and professional lives as well as offering key strategies to help women to network and build meaningful careers. Ms Clarke has embraced the opportunities this program provides and continues to advocate those to female staff.

Ms Jennifer Elizabeth GEER ASM MACAP

Ms Geer is Manager, Collaborative Emergency Health Programs with Ambulance Victoria, and has made an outstanding contribution to the development and provision of ambulance and emergency health services across rural Victoria.
Ms Geer has demonstrated exceptional service in the provision of clinical care as Registered Nurse, Ambulance and MICA Paramedic over a prolonged period, and outstanding leadership in the encouragement and development of health professional education programs and in the fostering of the aims and goals of Ambulance Victoria and its predecessor services in the community.
She has also provided significant leadership in the development and implementation of Remote Area Nurse Emergency Care Guidelines and associated education programs that have facilitated improved access to urgent care in isolated rural communities across Victoria.

Mr Gary Gordon GILLIES ASM MACAP

Mr Gillies has served the community of Queensland with distinction in the field of pre-hospital care since 1993. He has served in several positions within the Queensland Ambulance Service including paramedic roles, duties in relation to operational ambulance communications and project specific roles. In more recent times he has undertaken the duties of Computer Aided Dispatch Client Manager.
In this role, he is credited with successfully overseeing the implementation of the Emergency Services Computer Aided Dispatch project for the Queensland Ambulance Service. The role has presented many challenges that Mr Gillies has overcome with experience, confidence and a superior understanding of the technical imperatives of the project.
Mr Gillies is the epitome of the professional Ambulance Officer.

Mr Philip James GOOD ASM FACAP

Mr Good has provided over 34 years of dedicated and diligent duty to the Ambulance Service of NSW, serving predominately in the greater Sydney area. Since becoming interested, supportive of, and involved with Clinical Services, Mr Good has demonstrated an exceptionally strong commitment to ensuring that pre-hospital clinical practice is underpinned by a supportive culture. He has worked tirelessly as Manager Patient Safety, appreciating and relating to the realities and complexities of operational clinical practice. Mr Good has made a significant contribution to transforming the culture of the Ambulance Service into one where it is exceptionally common for paramedics to self-report variations to practice.

Mr Paul Markus GRAY ASM MACAP

During the early years of his career with St John Ambulance in Western Australia, Mr Gray worked in various metropolitan locations and relief positions in Albany and Geraldton. In 1995 he was appointed a Clinical Support Officer. He was also seconded to the Ambulance Officer Training Centre on a number of occasions and in June 1996 was promoted to Deputy Superintendent. In 1999, Mr Gray was appointed Regional Manager for the metropolitan region.
This position was later redesignated as Manager Metropolitan Operations, and Mr Gray was responsible for managing the Organisation's Clinical Standards. Since 2005 he has served with distinction as Manager Country Region. One of his particular strengths has been his ability to motivate those around him and gain their commitment, and he has been able to refocus and mould the country management support team into a very effective unit.

With 500,000 people spread over 2.5 million kilometres, rural Western Australia presents some unique challenges in the provision of ambulance services. It is vital that there is a significant volunteer contribution which must complement and work in conjunction with the career paramedic service. Mr Gray's outstanding ability to develop and manage his team effectively has played a major role in ensuring the effectiveness and sustainability of the St John Ambulance model for the provision of ambulance services throughout Western Australia.

Mr Jeffrey William HESCOTT ASM MACAP

Mr Hescott joined the Ambulance Service of NSW in 1985 as a Paramedic, and acted in many frontline managerial positions with distinction before accepting a secondment to the Ambulance Computer Aided Dispatch (CAD) Project at State Headquarters in 1996. Mr Hescott managed the technical infrastructure of the CAD System, supporting the introduction of new emerging technologies such as Mobile Data, Vehicle Tracking, etc, while managing system reliability and stability to ensure 24/7 business continuity. Mr Hescott was further seconded to the Department of Commerce in 2003 and continued to manage the System Support Unit until his promotion to Manager, Operational Support in the Northern Division in 2006. He was promoted to his current position of Assistant Divisional Manager, Hunter, in September 2008.

Ms Catherine Sarah McNAMARA ASM MACAP

Ms McNamara joined the Tasmanian Ambulance Service in 1983 as a Volunteer Officer in Hobart. Two years later she joined the permanent staff as a Student Ambulance Officer and was the first female in Tasmania to graduate as a Qualified Ambulance Officer and was the first female Intensive Care Paramedic in Tasmania. She went on to work in Clinical Instructor and Ambulance Educator positions in an acting capacity until 2002 when she was appointed to the position of Ambulance Educator. Ms McNamara has made a significant contribution in Paramedic Education within the Tasmanian Ambulance Service. She has tertiary qualifications in Education, Nursing and Paramedic Studies and is a valued member of the Clinical Practice and Education Unit. She is highly regarded as an authority in paramedic tertiary education and is currently the Course Coordinator for Intensive Care Paramedic
Studies. Ms McNamara also regularly practices as an Intensive Care Paramedic in the field and provides on-the-job clinical mentoring for Student Paramedics.

Mr Garry Kenneth SINCLAIR
ASM MACAP

Mr Sinclair commenced with the Ambulance Service of NSW in 1981 and worked in Sydney and Central Western area. Throughout his distinguished and lengthy career he has demonstrated consistent and resilient leadership in the development and implementation of strategies, initiatives and systems to enhance the operational and clinical quality and performance of the Ambulance Service.

Mr Sinclair has also demonstrated outstanding leadership in the amalgamation of Operations Centres into the current configuration and the introduction of CAD processes, as well as the introduction and management of the Variations to Clinical Practice system.

Mr Anthony Ross (Tony) VAUGHAN
ASM MACAP

Mr Vaughan commenced as a Cadet with the St John Ambulance in 1973, and joined the Barossa Combined Division in 1980. In 1984, Mr Vaughan gained a full-time position with St John Ambulance in the metropolitan area, first on clinic operations and later as an Ambulance Officer in the northern suburbs and at Port Augusta.

His St John Ambulance commitment did not stop and he was appointed to several Corps Staff Officer positions in the Lower North Corps and the Mid North/ Far North Corps between 1988 and 1990. Throughout his service with the St John Ambulance and later the South Australian Ambulance Service (SAAS), Mr Vaughan has served with distinction.

In 1991, he was appointed Regional Training Officer for far north South Australia and, in 1993, was appointed to the position of District Officer, the youngest appointed senior manager in the service’s history. Mr Vaughan’s outstanding knowledge, skills, attitude and perseverance during a time of rapid change in the SAAS have been invaluable.

His drive and leadership in getting a Regional Sponsored Degree Program off the ground finally provided a significant career path for volunteers and those in the SAAS with a Certificate IV, and addressed staffing shortfalls in country locations.

Mr Vaughan has also had significant involvement in the development of the SAAS Volunteer Health Advisory Council, a body that has an important role in the support of volunteers and volunteerism. His commitment, dedication and loyalty to the SAAS, particularly the volunteer sector, are exemplary.

Mr James Edwin VERNON
ASM MACAP

Mr Vernon joined the Ambulance Service of NSW as an Ambulance Paramedic in Sydney in 1979, and has played a pivotal role in a number of key areas including the collation and drafting of the first State Standard Operational Procedures, as Project Officer for the Mobile Data Terminal (MDT) Project, and in the key role of Secretary on the State MDT Joint Consultantive Committee.

Mr Vernon was also instrumental in the establishment and setting up the Northern Operations Centre, as well as assisting with the Computer Aided Dispatch Project in the amalgamation process of many centres across NSW.

Mr Vernon also represents the Ambulance Service on the National Emergency Communications Working Group. Mr Vernon has served with distinction as the Manager of the Northern Operations at Charlestown since 1998.
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Payment Details: Please complete either the Payroll Deduction Authority or the Credit card payment details.

Payroll Deduction Authorisation:

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