Lest we forget

Talking with our Veterans
Managing UTI’s Out of Hospital
Ambulance Service Medal Recipients 2015
Meet the SPA Committee for 2015
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Editor’s Choice $150 prize

For this edition, the winners are Warren Smith for his very topical article on talking with our veterans, and Michael Boland for his in depth look at managing UTI’s. Two very good articles, that I couldn’t split – so I will share the prize to both!

Congratulations and thank you!
In November last year PA ran a significant Strategic Directions workshop with participants including Board Representatives, Chapter and SPA representatives. An independent expert facilitator Mary Maddock managed the process and succeeded in keeping participants focused and motivated through a challenging two-day session.

Following the workshop I worked with our Executive Officer Robyn Smith to assess the raw data collected on the day and develop our draft PA Strategic Direction Plan for 2015-2017. The Plan has been circulated to participants and our Branches and SIGs as part of a consultation process to refine the original draft.

I am now very pleased to present the PA Strategic Direction Plan to PA Members, and is printed in this edition of Response in the Board Matters section across the following pages. At present we are operationalising the Plan, to determine the actions required to achieve the goals, defining the measures of success and mobilising the resources to execute the actions. As part of this process we recently held a PA Operations workshop where individuals who manage various aspects of PA’s business came together to ensure a collective understanding of the four key goals for PA in the next three years and the central role of operations in underpinning the delivery and success of the Plan.

I look forward to bringing your further updates as we define the measures of success for our key goals, align our financial and operational resources and implement the Plan over the next three years. Once again thank you to all the participants and contributors in the strategic planning process. I can assure you it won’t be a document that is tucked away on a shelf for three years!
PA Strategic Direction Plan 2015-2017

1 Our Vision – What we aspire
- PA is the peak professional body representing paramedic practitioners in Australasia promoting the profession and paramedic practice in the public interest

2 Our Purpose – Why we exist
- We believe in the value of paramedicine
- We believe paramedics have a profound impact on people’s lives

3 Our Mission – What is our role
As the peak Australasian body, we make a difference to paramedics by:
- Representing the interests of the profession
- Leading and driving professional standards
- Focusing on professional development

4 Our Values – What we will not compromise
- Integrity – We do what we say
- Commitment – We are passionate and focused on the vision
- Mutual respect – We encourage individuality, acknowledge and develop others’ ideas and experience
- Ethical – We act in an open, honest and responsible way
- Unity – We lead together by acting as one

5 Our Strategic Goals – What we will focus on
- Representing the Profession – We are the influential body representing the paramedic profession
- Advancing the Profession – We champion the evolution and direction of paramedicine
- Member growth and value – We build capability to develop and grow the paramedic profession
- PA organisation – We are a robust and sustainable health services organisation

Goal 1: Representing the Profession – We are the influential body representing the paramedic profession
3-5 Year Desired Outcomes
- Our members actively engage in pathways to learn, develop and network
- Increased membership within the profession
- New chapters are created across Australasia

Ref No Strategies
1.1 Represent the interests and value of paramedicine and paramedics on health care issues that matter
1.2 Broaden our sphere of influence and representation
1.3 Build understanding and awareness of the importance of paramedics to people's health and well-being

Goal 2: Advancing the Profession – We champion the evolution and direction of paramedicine
3-5 Year Desired Outcomes
- Paramedicine is professionally recognised and nationally regulated
- Professional and clinical evidentiary based paramedicine standards is evident across Australasia

Ref No Strategies
2.1 Lead and drive national registration to standardise the profession
2.2 Expand and influence paramedic education and accreditation to be in command of the science of paramedicine
2.3 Build our research knowledge and capability to continue to evolve the profession
2.4 Influence the direction of paramedicine internationally

Goal 3: Member Growth and Value – We build capability to develop and grow the paramedic profession
3-5 Year Desired Outcomes
- Our members actively engage in pathways to learn, develop and network
- Increased membership within the profession
- New chapters are created across Australasia

Ref No Strategies
3.1 Actively grow our membership base
3.2 Develop and promote a range of member programs and platforms for professional development (ie: CPD, International conference)
3.3 Develop a suite of member services to support our profession (ie: social, professional, welfare, mental health)

Goal 4: Organisation – We are a robust and sustainable professional health services organisation
3-5 Year Desired Outcomes
- We are recognised as the leading paramedics organisation across Australasia for what we do and how we do it
- We operate within a sustainable, effective and ethical business model and governance structure
- Key stakeholders seek to partner with our organisation

Ref No Strategies
4.1 Redefine our governance structure and resources to deliver the strategic direction
4.2 Redefine our systems and processes to ensure easy access and accountability
4.3 Effectively communicate to our members and stakeholders our direction, performance and progress
4.4 Foster stakeholder relationships for mutual benefit
4.5 Ensure our organisation is financially sustainable
Recent guideline updates include First Aid Management of a Seizure (Guideline 9.2.4), The Use of Oxygen in Emergencies (Guideline 10.4), and Targeted Oxygen Therapy in Adult Advanced Life Support (Guideline 11.6.1).

Guideline 10.4 aims to provide information for first responders and educators in situations where oxygen may be administered prior to care by health professionals. The guideline emphasises the importance of training in the use of oxygen delivery devices and methods. Where pulse oximetry is available, the guideline recommends that “victims with an oxygen saturation of 94% or above do not usually need supplemental oxygen unless there are signs of shock.” (Guideline 10.4) Although there is some evidence of harm associated with oxygen administration, the guideline states that “short-term administration of supplemental oxygen to a breathing victim will not cause harm in most circumstances”.

The Australian Resuscitation Council now links the evidence worksheets to the guidelines. These show the research question using the PICO format (Population or Problem, Intervention, Comparator or Control, Outcome), the search strategy, and the assessment of the evidence used to formulate the guideline. In the case of Guideline 10.4, the search failed to identify any published high level studies that described the use of oxygen in the pre-hospital context by first aiders or first responders. As such, expert consensus opinion guided the development of this guideline.

The development of the Targeted Oxygen Therapy guideline (ALS Guideline 11.6.1) was also challenged by lack of high level evidence. The review process considered evidence of harm or benefit in the settings of cardiac arrest and following return of spontaneous circulation. The evidence was generally of a low level or was inconsistent and conflicting. The use of oxygen in other conditions is described in the guideline, along with the level of evidence and sources used to inform the recommendations. Evidence from one Australian study should influence further guideline development in the setting of oxygen in the treatment of myocardial infarction. However, the results were not available at the publication deadline.

Although the availability of high level evidence is currently constraining the process of guideline development, several important studies are in progress that may help to answer a range of important clinical questions. The forthcoming “Spark of Life” conference in Melbourne from 16-18 April 2015 will showcase some of the emerging evidence that may improve resuscitation outcomes. The conference includes the Neonatal Satellite Meeting on 16 April, which will involve workshops on obstetric emergencies and neonatal resuscitation.

The conference program and registration details are available from the ARC website:

Reference


Associate Professor Bill Lord
School of Health and Sport Sciences, University of the Sunshine Coast
Talking with our Veterans

Warren Smith

Introduction

It was supposed to be a simple transfer of an elderly gentleman with congestive heart failure being admitted to hospital. It turned into 45 minutes of some of the most amazing stories I have had the pleasure to listen to from one of our World War 2 veterans. In fact by the time we arrived at hospital the patient had become slightly worse in presentation due to the fact he talked virtually non stop on his life experience during the war and to be honest I did not want him to stop.

Their Stories

My patient was a rear gunner in a wellington bomber, affectionately referred to as a wimpy, fighting in the Mediterranean during World War 2. There were accounts of the low level flights they performed to avoid detection before popping up to attack naval vessels anchored in harbours.

The patient described the feeling of flying so low over the ocean that spray from waves was hitting the windshield of the bomber forming salt crystals and blurring their vision. One of his stories included being on a night raid in a storm whereby they had completed their mission and they were on their way back to their base when, half asleep, they spotted three enemy fighters flying above them in the storm clouds.

The gentleman immediately shouted down the comms line “fighters above” from which the pilot said “shut up, I know – I’m trying to hide in the storm”. The crew were able to avoid a fight and sneak back home.

Being a rear gunner the patient recounted the number of battles with enemy fighter aircraft that he was involved in and the near misses he had as a rear gunner. I asked the patient wasn’t he scared, he said at times but the worst thing he hated was seeing the tracers coming closer and closer to his position. The patient said “at least with a bullet you don’t see it coming”. I remember seeing an interview with Keith Miller an Australian cricketer and World War 2 fighter pilot was once asked about pressure in cricket to which Keith Miller replied “Pressure”, he said. “I’ll tell you what pressure is, pressure is a Messerschmitt up your arse. Playing cricket is not”. (http://www.abc.net.au/7.30/content/2004/s1218626.htm)

Another patient I was transporting told me of his battles in the Australian Army fighting in New Guinea whereby he was shot in the abdomen. The patient was carried for three days to an aid station and it took almost a week to get to a hospital ship to receive the definitive care for his trauma. The patient made it back to Australia after a month of travel where he was able to recover from his wounds. I remember saying to the patient it would have been the fuzzy wuzzy angels who carried you back to the aid station whereby he replied “oh my God yes” and then he went on to tell of stories of getting the wounded soldiers back to aid stations and how much dedication was demonstrated by the angels in getting soldiers to care. I could tell of the admiration this veteran had for the local inhabitants by the way he spoke of them and their deeds.

I was also able to talk with a navigator who flew in Lancaster bombers with bomber command in England during the World War 2 and he told me of the night bombing raids they performed and how he he used to navigate at night. The patient went on to talk about the various raids and the fights they had and the mates that were killed in action. The patient did mention that he only ever crash landed once in his life time and I asked where – thinking it was during one of these missions but he replied – in the eighties in a single engine aircraft, “the bloody thing nearly killed me”. All I could do was smile at the dry Australian sense of humour.

There were many other stories including talking with one of the rats of Tobruk who described the bombardment by artillery in the siege and how he said it was as spectacular as it was dangerous especially at night to see the various flashes. There was also the gentleman who we had been to a couple of times in one week due to constant falls at home, who also fought in New Guinea. This meek frail man’s demeanour changed in an instant when I mentioned fighting in the war as a soldier. He was taken as a prisoner of war and went on to talk of the treatment he encountered during his imprisonment and the long lasting effect it had on him to this day and the anger he still has to this day.

The Mixed Emotions

I found that in talking with our veterans they would take delight in someone listening to their stories and discussing with them the events that had occurred in their lifetime. They would happily tell of the funny stories that happened to them during war and the humorous events and pranks they got up to as only Aussies could be involved in.
The one thing they never described in any detail was the horror of war and what they had seen during the various battles or the death that surrounded them. We would eventually talk about the soldiers who did not return and their mates they had fought battles with and who died during the various wars. It was quite clear that they didn’t fight for the glory, or as one veteran put it they didn’t fight for the generals or the Politician’s but they did it for their mates and to ensure our country and families back at home remained a free nation.

Not once did any veteran claim the status of hero or of doing great deeds and openly boasting about it. I remember mentioning to one veteran that he was a hero and with this he replied “no, the heroes are still there, the real heroes didn’t come home”. I found that once we got to talking about their mates that fought and died with them that their emotions changed and you could see the tears form in their eyes and voices become a little shaky as they remember the mates that they fought with. One veteran grabbed my knee and said to cherish your family and life. Another veteran would talk of the uselessness of war, the destruction that occurred and that it was a terrible waste of human life.

Their emotions varied as men who are in their 70’s and 80’s from joy to sadness, on reflection of war to coming home to their families and the struggle that some had to return back into normal life. There is still anger over the war with some veterans who were finding it difficult to forgive and forget or the sacrifice that was made by so many to keep the peace. One group of veterans who didn’t talk very much and were almost ashamed of talking about their experiences were the Vietnam veterans. These Australians went to a foreign country to fight in battles and they died in this country far away from families and friends. Their families suffered and ones that came home were not accorded the recognition they so rightly deserve because of the political climate of the era. Vietnam veterans rightly deserve the respect and admiration of their nation and they certainly have my utmost respect for their achievements and sacrifice.

Conclusion

I have had an opportunity to talk with veterans from the First World War through to the Second World War, Korea, Malaysia and Vietnam. I only wish early in my career that I took the time to talk with Gallipoli and WW1 veterans as I do today with other veterans. I have witnessed a vast array of emotions, the joy of someone listening to these amazing people to grief that overcomes them when they remember friends and the events that they were involved in. There have been intriguing stories of courage and duty, pranks and funny stories and I have thoroughly enjoyed talking with our war veterans and their families. All veterans deserve our thanks, they have my fullest respect and should be treated with dignity and the most professional care that we can provide, as should all of our patients.

As we approach the centenary of the Gallipoli landings I can only encourage every paramedic that has an opportunity to talk with our war veterans and hopefully you will be as amazed by their stories and their resilience as I have been.

Anzac Day Ode

They shall grow not old, as we that are left grow old; Age shall not weary them, nor the years condemn. At the going down of the sun and in the morning We will remember them.


In the reflections of the elderly we learn the past, in the eyes of our youth we see the future, today is determined by what we do in the moment.

Warren Smith
Clinical Support Officer, Widebay LASN, Queensland
Welcome to SPA for 2015! My name is Carolyn and I am the new elected SPA Convenor, who has the honour of leading our fantastically dedicated Executive Committee this year.

2014 was a mammoth year for SPA with additions to our commitments and programs across various portfolios. The 7th annual SPA conference extended over 3 days incorporating workshops, participation in the Ferno Australia Paramedic Sim Challenge all on top of our standard very full conference day program. Also in 2014, SPA introduced its first international exchange opportunities with a group visiting Prague and Romania. On a more local front SPA also contributed to the running of and had participants in RAW – Rural Appreciation Weekend, a fantastic event that provided many students with an introduction and understanding of Rural Health practice. With this list of achievements in mind I would like to take a moment to thank our some of our 2014 committee who have moved on to some different challenges; in particular Levi and Ben our fearless leaders who have dedicated many years to SPA, thank you.

Some of the many developments to come from last year were a change in structure to the SPA committee itself and a change in our membership system. Last year saw the introduction of an online membership system. After a few teething problems it has helped streamline the process and everybody should be able to access this same system of membership for 2015. I hope by this stage many of our local societies are already well under way, but any people unsure of the SPA membership process please contact us. Given the growth of our membership in this new system and to support our local student groups to a larger degree we have changed the committee structure moving away from one Australasian Coordinator to three. The format of the new committee structure follows; it is also available online for any student societies unsure of their point of contact.

As a member of the outgoing 2014 Executive Committee (from the role of Program Development) I was part of the very difficult task of electing the 2015 Executive. In a first for SPA the voting process was spread to include the local student societies with each group being able to vote on the Convenor and Co-Chair positions. There were an absolutely record number of applicants for the various SPA roles at the end of 2014, with the standard of applicants being truly exceptional. The level of competition for the various SPA roles made for some incredibly difficult decisions and to those people that missed out on a place I encourage you to stay involved with your local student groups and try again next year.

The final committee elected was a very strong one and I would like to encourage you all to read the bio’s below from the SPA team – meet your representatives for 2015!

SPA Executive Committee 2015

SPA are pleased to announce their new executive committee for 2015.

Convenor Carolyn Emerson

This is my second year on the SPA committee and my fourth year of involvement with SPA. I am excited to be returning to the committee this year as Convener having previously been involved in the portfolio of Program Development. Involvement in the 2014 Executive Committee has given me an insight into the running of the student conference and the potential of SPA to really benefit students from all universities.

I have recently completed my Bachelor of Paramedic Science through the University of Queensland and have just started employment with the Queensland Ambulance Service.

It is an honour to have been elected to the role of Convener and to be working with such a fabulous and passionate team for 2015. I plan to work with the various SPA committee portfolios to ensure we deliver innovative and engaging opportunities for our student members.

Co-Chair Jess Morton

After taking on the portfolio of Community Engagement for my first year in SPA in 2014, I feel very privileged to now step up as Co-chair for 2015.
I have very big shoes to attempt to fill as those who have held this role in the past, such as Ben Baxter, have achieved great things during their leadership. I really look forward to working with all of the new 2015 team and especially with the new structure which will allow us to engage more closely with our societies right across Australia and New-Zealand.

I have seen the growth that SPA has made over the past years and can see a lot of potential for how we can develop even further and create more opportunities for student paramedics to learn, engage, network and contribute to our community as a whole.

I am a part-time, distance student at Edith Cowan University and a Mum to 2 little boys. My areas of interest lie in the areas of primary and rural healthcare, mental health, #foamED and the use of Social media for medical education amongst a plethora of other things.

I really look forward to meeting more of you in 2015 as we bring you an even better and bigger year from SPA.

Co-Chair – Brienna Forster

It gives me great pleasure to hand over the position of “Communications Coordinator” to the talented Miss Liz Leov and take on the 2015 Co-chair role overseeing the Communications, Program Development and Sponsorship portfolios.

2015 is a year of opportunities, having just completed my final year of a Bachelor of Science (Paramedical Science) Degree at Edith Cowan University, Western Australia. Recently returning from a 5 month exchange in Indonesia, I am excited to open the next door of my journey; fulfilling my dreams of becoming a paramedic.

Being a committee member is about sharing my enthusiasm for such a great industry and connecting with like-minded people all over the Australasia. This year I will strive towards continuing previous SPA committees’ hard work, engaging members, seeking for new opportunities and pushing for registration, all whilst upholding the core values of SPA and PA.

I look forward to working alongside our passionate, enthusiastic SPA team where we will represent and advocate for students paramedics. I am excited to nurture and support their innovative ideas aimed to strengthen student Paramedicine in Australia and New Zealand.

Should you have any suggestions or enquiries, contact me at: brienna.forster@studentparamedic.org.au

Secretary – Lauren Flett

My name is Lauren Flett, most people know me as Loz. In 2015 I will be a member of the SPA committee in the Secretary and Administration role, taking over from Tess Chaplin. My role includes facilitating committee meetings, coordinating communication and producing an event calendar so that members know what events are on; as well as providing support to other committee roles.

I am entering into my third year of the dual Nursing and Paramedicine degree at the Australian Catholic University Canberra campus. My first introduction into pre-hospital care began as a volunteer through St John Ambulance ACT and the ACT Rural Fire Service. My experiences while volunteering enlightened my passion to become a health care professional. As I progress through the degree and into my career, I hope to be an integral part of the innovative and emerging research that improves both pre-hospital care and emergency nursing.

My history with SPA began in 2012 as a committee member of my local SPA chapter, progressing to Treasurer in 2013. I have developed a passion for providing students with opportunities in professional development outside of the university curriculum through networking, community involvement and CPD events. In 2015 I will be dedicated to maintaining a smooth correspondence between SPA, the university chapters, members and other stakeholders.

I hope to continue the great work achieved by the 2014 SPA committee and deliver another incredible conference.

Australasian Coordinator (QLD, SA, WA) – Cassie Luck

My name is Cassie Luck and I will be taking up the new the role of Society Coordinator for QLD, SA & WA.

I have lived on the Sunshine Coast my whole life and enjoy the lifestyle. I have a family with 2 children, one in primary school and the other starting high school this year. Prior to commencing my Paramedicine studies I worked in an administration role as Business Relations Manager. I have continues this work on a part time basis while studying.

This year I am entering my 3rd and final year of study of Paramedic Science at The University of the Sunshine Coast, QLD. My journey has just started with SPA but I have been an active member of our University Student Paramedics Association (SCUPA) since my first year of study as Treasurer and have taken on the role of President for the 2014/2015 year. The events that SCUPA has been able to organise, while I have been associated, has inspired me to become more involved within my own uni as well as with the SPA community.

This year I am looking forward to collaborating with the state societies (that fall under my portfolio), with the aim to boost interest and membership levels. A goal of mine would be to build relationships between universities, strengthening bonds and organising inter-university events.

I look forward to working with the SPA committee for another successful year.
Australasian Coordinator  
(VIC, TAS) – Mat Carter

I am currently undertaking the 3rd year of my Bachelor of Health Science (Paramedics) at Victoria University. I am the current president of VUSPA and the General Secretary of the Society for the College of Health and Biomedicine at VU. In 2015, I have been appointed to the portfolio of Australasian Coordinator (Victoria and Tasmania) with SPA.

This will be my first year on the SPA committee, however I have previous experience working with the organisation through my role in VUSPA. Last year I volunteered with SPA and FERNO to assist with the running of the 2014 FERNO Sim Challenge at Jupiter’s Casino on the Gold Coast. Over the past 2 years, I have witnessed SPA develop into a respectful organisation in its own right – as demonstrated by the success of the 2014 International SPA Conference.

I believe that university societies are the backbone of SPA. I hope to utilise my experience in order to support them to effectively represent their membership base. I am a strong believer in promoting efficiency and I hope to utilise the strengths of each association in Victoria and Tasmania to develop a universal working model for the future.

I look forward to working with the 2015 committee and I hope that in my role as Australasian Coordinator, I will be able to help SPA grow to its full potential!

Community Engagement  
– Lucinda Abouritz

Hi there, my name is Lucinda and I am very excited to be taking on the Community Engagement portfolio with the SPA committee in 2015! I am going into my second year of a Bachelor of Health Science (Paramedics) at Victoria University and can’t wait to see what the year has installed. Prior to commencing paramedics I completed a Bachelor of Arts in Politics and International Studies at Monash University. I hope to use connections gained through personal voluntary commitments to assist me in my role with SPA.

Community engagement is an area I approach with great excitement and passion. I have a strong belief that active participation within the community provides all those involved with invaluable opportunities and knowledge. This can be as simple as putting a smile on someone’s face or learning something new, to being the underlying factor in obtaining a new job or position. For students there can be a lot of barriers to participating in activities within the community. Thus my goal for 2015 is to minimise these barriers and provide students with as many opportunities as possible to develop and expand skills, and assist others within our community.

Rural Health Initiatives  
– Frances Kirchner

I am a 3rd year Paramedical Science student at Edith Cowan University in Western Australia. I work full-time as an Environmental Officer and have recently commenced work as a casual Patient Transport Officer with St John Ambulance WA. I have been elected to the position of ‘Rural Health Initiatives’ on the SPA Committee for 2015 and am thrilled to have the opportunity to contribute.

This is my first year on the SPA committee. I have attended the last two SPA conferences in Melbourne and the Gold Coast and been awed by the amazing work put into organising the events and have personally benefited greatly from the conferences. I am also an active member of the WA Student Paramedics society who are similarly an amazingly dedicated group of people. As I enter my last year of study it’s time to ‘give-back’.

The overarching goal I have for the Rural Health Initiatives position is to provide greater opportunities for paramedical students to gain knowledge, experience and awareness in the rural sector and work towards expanding the roles that we can undertake in remote areas in liaison with other health professions. Paramedics working in remote/rural Australia are in the perfect position to assist with primary health care and prevention initiatives. The role of community paramedicine will only continue to grow and as students we need to be prepared to inform ourselves and capitalise on this added dimension to our careers.

My inbox is open to any and all ideas and I look forward to working with the SPA committee to continue the brilliant work into 2015!

Communications – Liz Leov

Hi there! My name is Liz Leov and 2015 will be my second year on the SPA committee! I am a fourth (and final) year Bachelor of Nursing/Bachelor of Clinical Practice (Paramedicine) student at CSU, Bathurst. I am highly involved with my local society CSUSPA, currently holding the position of president.

As your Student Paramedics Australasia Communications representative for 2015, my aim is to ensure that students have their voice heard and information is adequately relayed between students, SPA and PA. I hope to work with other SPA team members to effectively provide students with the information they need to keep up to date with SPA and PA happenings, providing them with the opportunities to participate in our events and gain access to the vast number of events and resources available through our organisation!

I believe that involvement in SPA events provides amazing opportunities for student growth. Pursuing active learning and current research, networking and learning from mentors allows students to develop both personally and professionally. Thus, I hope to see more students engaging with the content provided through SPA to build a community of even greater professionals!

Contact me: elizabeth.leov@studentparamedic.org.au

Program Development  
– Callum Sutton

My name is Callum Sutton, I am going into the third year of my Bachelor of Health Science (Paramedic) degree at Victoria University, Melbourne. This Year I will be taking on the Programs Development portfolio.

This is my second year on the SPA committee. I thoroughly enjoyed networking, collaborating and promoting the student societies last year; holding the position of Publications. I hope that we can continue strong in 2015, bringing you a successful conference following the one held on the Gold Coast last October.
My goal is to open up as many viable opportunities for our members at a state, national and international levels. I aim to develop some great programs, both practical and theory based for students around the country and of course I look forward to working with Kathleen Stinson & David Stil as well as the whole SPA committee to deliver another fantastic national conference to SPA members.

**Web Editor & Social Media**

– Michael Milko Birtill

My name is Michael Birtill and this year I will be the Web Editor and Social Media Coordinator. As this is my second year in this position, I understand what it will take to excel at this role.

I have just graduated from The University of Queensland and am now employed by The Queensland Ambulance Service.

I took the Web Editor position from strength to strength last year with an exponential growth in all areas and mediums. This year I am looking to build upon my success from last year and introduce some really useful stuff for students, watch this space!

The executive committee this year is looking like one of the most motivated and enthusiastic groups I have ever had the pleasure to work with in any endeavour. I cannot wait to work on projects together and make 2015 the year of the paramedic student.

Should you have any suggestions, queries or just want to chat, contact me at: Michael.birtill@studentparamedic.org.au

**Publications**

– John Kostakis

Hi, I’m Johnny. I’m a second year paramedic student at The University of Western Sydney and I have been newly appointed the publications role for 2015.

My story with SPA thus far started when my fellow first year paramedic peers and I came together to establish the founding committee of Student Paramedics Australasia University of Western Sydney, SPAUWS. My main role of Multimedia and Communications Coordinator has been maintained since the formation of this society. This role has been a fantastic insight and learning experience, which has encouraged me to apply some of my skills and further enhance my knowledge during my position with SPA.

What I’m hoping to achieve this year with SPA in publications is to really give student paramedics, in addition to the broader community, a vivid insight into the world of a paramedic student. Along with promoting and advertising past and ongoing research many of us do, I also aim to spread the word and inform others of social events, volunteer work and source as much information as possible about CPD’s and other events.

I am always open to all sorts of inputs and ideas, so please don’t hesitate to contact me about any matters on...

**Sponsorship**

– Hilary Suridge

I am so excited to be part of SPA in 2015, taking on the role of sponsorship. I am in my first year of the Bachelor of Paramedic Science Program at the University of Queensland. I have had a keen interest in medicine and paramedic science for the best part of ten years. I have been involved with the University of Queensland Student Paramedics Society for two years and have been involved with SPA events for two years as well. Last year in 2014, I had the privilege of attending the 2014 SPA Conference and saw firsthand how extensive and essential the involvement of SPA is to the student community. I was impressed by the encouragement students receive and the products and professional development students obtain from SPA.

I believe that professional experiences and liaising with associations and companies that already have an involvement in the paramedic community is essential in the growth of the professional development of the student paramedic. I have had some experience with sponsorship and know how important it is to the student paramedic community. I hope to get in touch with important sponsors this year, so that students can have a firsthand look on the quality merchandise they offer and receive hands-on experience with products used by qualified paramedics all over Australia and Overseas. This will also give industry leaders who offer sponsorship, opportunities to showcase their world-class products and paramedical experience.

My aim is to accrue as many big and small businesses, associations and organisations to SPA as possible, and hopefully bring real-world experience to the students and SPA, and also attract as much spotlight to the community group as possible.

Please don’t hesitate to contact me at: Hilary.suridge@studentparamedic.org.au

**Conference Committee**

– Kathleen Stinson

My name is Kathleen and I’ve been fortunate enough to be selected as a member on the SPA executive committee. I have a strong background in health and before starting my degree I worked in a number of health roles, ranging from cancer care, child health, correctional services, Ambulance NSW and I’ve also worked in a number of emergency departments over the years. I started my degree in Queensland and in February 2014 transferred to Sydney, I’ve been able to see first-hand the differences between the states and how they operate which has been a great opportunity. Currently I’m in my final year of study at UTAS and looking forward to my final placements and working with SPA.

**Conference Committee**

– David Stil

My name’s David, I’ll be taking up one of the conference committee roles in 2015. I’m entering my fourth year of the combined Bachelor of Nursing/Paramedicine at the Australian Catholic University’s Signadou campus in Canberra. I came to this degree the roundabout way, starting with an attempted degree in software engineering, a job in childcare, then volunteering for St John before I decided that paramedicine was what I really wanted to do all along.

I love the SPA conferences – I attended alone in 2013, but joined two entire FernoSim teams the following year. These gatherings are the most incredible way to get in touch with students from around Australia, hear a little about what it’s like to live and work in other states and territories, and to hear about how we’ll be practicing our craft in the future. I hope that in 2015 we can put together the must-attend student paramedic event of the year.
Who are you?

S.P.U. – pronounced SPEW (yes, you read it right, exactly like vomit) is a student run society at Queensland University of Technology exclusively for student paramedics. S.P.U., or the Student Paramedic Undergraduates, is designed to get students through what could be their best, but also most challenging years of their life by helping out with the social and educational aspects of university.

Throughout the year we aim to provide educational support for our fellow students through self-directed learning sessions, CPDs and tours of facilities such as the Queensland Emergency Operations Centre, just to get started. We also know that uni students love to party (and we do too) so we hold social events throughout the year like our party boat “Booze Cruise”, trivia nights and our annual S.P.U. Ball which encourages all the student paramedics to mingle with their colleagues.

How many members do you have?

In 2014 we had around 125 members, but in 2015 we’re aiming for over 200.

Committee names and positions?

Sarah Lightowler Co-President
Larah McKenna Co-President
Alessandra Lipman Vice President
Adam Budulica Sports Coordinator
Kate Cave Academic Coordinator
Alex Zahnleiter Party Liaison
Sarah Cleary Media Coordinator
TBA 1st Year Rep
Luke Mewing 2nd Year Rep
Kallai Sugden 2nd Year Rep
Elizabeth Souness 3rd Year Rep
Brodie Claxton 3rd Year Rep

Projects like CPDs etc

2015 is set to be our biggest year yet. Not only do we already have our usual events already locked into the calendar, this year we have also organised the first ever S.P.U. Conference! That’s right, grab out your sharpie and mark it on your calendars, this is an event not to miss. While being a S.P.U. member gets you exclusive discounts and first preference for tickets, the S.P.U. Conference is open to all uni students throughout Australia, as well as those who are already qualified.

We’ve got plenty of guest speakers lined up for the conference who range from Paramedics, Doctors, Nurses, Physiotherapist and motivational speakers and we’ve designed it to be relevant to everyone studying or practicing paramedicine.

Other events throughout the year include our O-Week BBQ and Campus tour for the first year students. This kicks off the year with the chance for new students to ask those of us who have been around the block and have figured out the ins and outs of uni life any questions they have.

This year we are also introducing a new ‘buddy system’ which allows first years to pair up with a second, third or fourth year who they can ask questions and pick their brains about anything.

Why is being a part of your society/spa important

S.P.U. aims to allow students to cruise through uni, learn as much as they possibly can while making some lifelong friends and maybe some connections in their future professions.
Saint Patrick’s Student Paramedics (SPSP), the society representing students undertaking Paramedicine at Australian Catholic University Melbourne Campus, has kicked off the year with a new initiative which will see the financial burden of mandatory placements eased for many students in 2015. This year, 40 reimbursements of $100 are being made available to students, with the scheme expected to grow in years to come.

The initiative involved securing funding from the University, in addition to setting up relevant policy documentation and hardship criteria. While the reimbursements primarily focus on rural placements, the scheme acknowledges that some students live in outer metropolitan or rural areas and as such, reimbursements are based on a number of factors including the distance the student lives from the allocated ambulance branch where they undertake their placement.

The President of SPSP, Luke Morrison, said he was made aware of the necessity of such a scheme after stories of student paramedics sleeping in their cars or driving for excessive hours before and after shifts were brought to his attention.

“The scheme will help assist in reducing the financial hardship occurred from mandatory placements a considerable distance from the student’s home, hopefully seeing an end to students sleeping in cars or arriving exhausted after driving many hours to shifts” said Luke.

This initiative involved a lot of hard work from the student society and it’s good to see dedicated students taking charge of such large projects.

Central Queensland University appoints Ray Bange as Adjunct Associate Professor

CQU has appointed former Paramedics Australasia Policy Advisor Ray Bange as an Adjunct Associate Professor within the University’s School of Medical and Applied Sciences.

Ray would be best known to paramedics as a committed advocate for professionalism and national registration through his many years devoted to helping PA pull together the strands of a national registration system for paramedics.

“Professional registration is one of the most significant non-clinical issue facing paramedicine in Australasia at this time “ Ray says. “At the simplest level it is all about reducing public risk by ensuring that only qualified persons can use the title and work as professional paramedics.”

“Extensive investigation and broad-based consultation has supported the view that the most appropriate regulatory regime is for paramedics to be registered under the national Australian Health Practitioner Regulation Agency framework. In the public interest, I am hopeful that national registration will become a reality in the near future.”

Ray has had an exceptionally varied career at professional and senior executive levels spanning the public, private and educational sectors in Australia and overseas. Over the past two decades he has worked as a high level consultant for state, national and international agencies on issues such as health policy, risk management, governance and organisational change.

Ray will assist CQU with a variety of activities, including advice for new graduate programs and providing insights into healthcare service delivery models and regulatory frameworks.

He will give presentations to paramedic students on contemporary topics, while his experience in developing extension programs and international education will also assist with the School’s international endeavours.

Ray operates from a home base on the Queensland Sunshine Coast. In addition to his continuing interest in paramedic professionalism and service delivery, he is currently an active Executive Committee member of the Australian Health Care Reform Alliance, a coalition of some 37 health care professions and community groups.
Student Paramedics Australasia (SPA), as a special interest group of Paramedics Australasia, reflects on a particularly successful year in 2014. Currently in the transition of its executive committee for the changeover into 2015, SPA has this year recorded growth in its membership and its number of affiliated societies, has provided an improved continuing professional development (CPD) calendar for members, and has gained recognition locally and internationally for its efficacious community engagement.

SPA has braced for 2015 by with slight adjustments to its committee structure (pictured below). These changes reflect the expansion of SPA's network amongst new universities and have resulted in the Australasian Coordinator role being divided into three portfolios (by state/territory). The decision was also made for the Community Alliances portfolio to be incorporated into the Community Engagement portfolio which now assumes the responsibility for SPA's charity partner affiliation.

SPA EXECUTIVE COMMITTEE STRUCTURE

**Membership**

Membership as a student member of Paramedics Australasia is offered to persons who fulfil the requirement of being enrolled in an approved Australian or New Zealand pre-employment degree (or equivalent) leading to qualification as a paramedic.

Two significant changes to membership were implemented this year including the move to an online membership application process (Magic Members), and a membership fee increase of $5 to a total of $20 (not including university society contributions). SPA is pleased to report from its perspective that after some minor adjustments, the system is now running adequately and provides a quick and simple process for membership application.

SPA notes its highest student membership numbers to date, currently at 1,213 members (November 12).

**University societies**

This year’s SPA network extended to 18 university societies across 15 universities. In 2014 this included the initiation of a new SPA society at University of Western Sydney, and the re-establishment of a society at University of Tasmania (Hobart). Positive discussions taking place continue to work toward integrating SPA's Australian-based societies with its New Zealand-based societies.

SPA continues to support its Western Australia society (WASP) as it endeavours to amalgamate the student paramedic pools at the two perspective universities in WA which it envisions will significantly strengthen and expand the SPA network. SPA is optimistic this will be accomplished in 2015.

SPA also notes the (predicted) initiation of paramedic courses in 2015 at universities which have previously not offered them — namely in the states of NSW and Qld. SPA will seek to engage and support these new students, welcoming them to the national student network.

A particular success of this year has been the Australasian Coordinator's focus on the 5 Victorian-based societies which has involved facilitating state-based networking opportunities to strengthen networks and share resources amongst SPA's largest pool of societies. Ideally the success of this strategy this year has led to the SPA committee re-structure illustrated above.

**Communications**

A focus on SPA's social media this year has seen exponential growth. SPA's facebook page has increased from 2,000 ‘likes’ to 3,100 in a record-breaking amount of time. More importantly however, SPA's social media now boasts greater user interaction. This can be attributed to regular and scheduled social media updates based on data trends. It may also be attributed to the initiation of a weekly public discussion forum on both facebook and twitter, discussing issues relating to paramedic current affairs. This forum discussion is hosted weekly titled #SymposiumSunday and is monitored by the SPA web editor.

SPA continues to liaise with the PA web editor as she transfers data from the www.studentparamedic.org.au website onto the new WordPress website which SPA hopes to unveil early 2015 (pending readiness).

**Community Engagement**

SPA reports significant growth for 2014 in its community engagement sector. Among this growth SPA reflects on a strengthened relationship with the Australian Red Cross (which now offers a Red Cross representative to liaise directly with each SPA society) and SPA-lead presence at community events such as the Take Heart Australia and Australian Resuscitation Council CPR awareness events.

SPA continues to expand its network with other medical organisations through ensuring representation at stakeholder meetings of the Future Health Leaders council and at meetings of the National Rural Health Students Network (NRHSM).

**Continuing Professional Development (CPD)**

SPA has a limited history of offering CPD outside of its annual conference. This year however, SPA reflects on a number of events it has overseen.
These have included:

- Facilitating screenings of Ben Gilmour’s film *Paramedico – Around the World by Ambulance* in NSW & Victoria which was attended by Ben for a live (tweeted) Q&A
- Financially sponsoring as well as contributing to the workshop facilitation in the Rural Appreciation Week (RAW) clinical camp in Wagga Wagga NSW
- Facilitating a resilience/ preparedness workshop with Behind The Seen Australia in Western Sydney which focussed on stress management, burn out, depression & PTSD
- Arranging an overseas observer trip in conjunction with Challenges Abroad Australia in which two executive SPA members lead a group of paramedic students to observe prehospital care in Romania.

**SPA annual conference**

SPA’s seventh annual international conference, while attracting a smaller audience than the previous year, provided a unique opportunity for students. For the first time since the conference’s inception, delegates had the opportunity to attend both PAIC and SPA Conference.

Students also had the opportunity (for the first time) to attend two pre-conference workshops hosted specifically for students. The biggest attraction however was the addition of a student component to the Ferno Australia Paramedic Simulation Challenge which attracted 9 competing student teams from 8 universities.

Key aspects of the conference which were involved this year included the SPA charity raffle (raising $1,500 for SPA’s partner charity *Day Of Difference*), the publishing of conference abstract submissions in the Australasian Journal of Paramedicine, and the awarding of a one-week clinical placement in Vanuatu with ProMedical ambulance (awarded to the best abstract submission).

SPA looks forward to moving forward in 2015 with a committee comprised of new and returning representatives. With the accomplishments of 2014 to reflect on, 2015 will no doubt be met with an even greater enthusiasm by the passionate SPA executive committee.
Paramedics Australasia International Conference

2-3 October 2015
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Join other like-minded Paramedic practitioners from all over the world at PAIC 2015 to discover new research and improve your skills.

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An Introductory Guide to Urinary Tract Infections

Michael Boland

Introduction

Whilst I was working as an Extended Care Paramedic (ECP) in South Australia, the major infection group that I saw was Urinary Tract Infections (UTIs), which is particularly prevalent in Residential Aged Care Facilities (RACF).

UTI relates to any part of the urinary system which includes urethra, bladder, ureters and kidneys. It is a common presentation in the setting of the GP, but also in ECP practice. It is more common amongst sexually active women than it is in men and children. In the RACF client group, UTI is a significant problem particularly with women. The incidence of UTI in the RACF rises rapidly with the increase in age, as opposed to the same age group living in the community where the incidence is lower. Lower UTI appears to be the main presentation to a GP requiring antibiotics.

Escherichia coli (E.coli) accounts for 80%-90% of infections though, in long term indwelling catheters, (IDC) polymicrobial bacteriuria is common including Pseudomonas aeruginosa amongst others.

The over use, the inappropriate use and poor compliance in the use of antibiotics leads to multi resistant bacteria causing refractory UTI’s, recurrent UTI’s and Urosepsis. “Sepsis is one of the leading causes of death in hospital patients worldwide. It causes more deaths than prostate cancer, breast cancer and HIV/AIDS combined. There are approximately 15,000 episodes of severe sepsis and septic shock in Australian and New Zealand intensive care units per year.”

Paediatrics (<14 years of age) are not part of this article and for further information I would recommend The Royal Children’s Hospital website for information of paediatric UTI. Though I have included some information regarding presentation further on in this article.

Terminology

Cystitis: An infection of the superficial bladder mucosa

Lower UTI: Consists of the bladder and the urethra. Generally the presentation is of cystitis. Infection in the lower urinary tract can affect the urethra (urethritis) or the bladder (cystitis).

Upper urinary tract: Composed of the kidneys and ureters. Infection in the upper urinary tract generally affects the kidneys (pyelonephritis) which can cause pain, fever, chills, nausea, vomiting.

Asymptomatic bacteriuria: Presence of bacteriuria in urine revealed by quantitative culture or microscopy in a sample taken from a patient without any typical symptoms of lower or upper urinary tract infection. In contrast with symptomatic bacteriuria, the presence of asymptomatic bacteriuria should be confirmed by two consecutive urine samples.

Bacteraemia: Presence of bacteria in the blood diagnosed by blood culture.

Bacteriuria: Presence of bacteria in urine revealed by quantitative culture or microscopy.

Empirical treatment: Treatment based on clinical symptoms or signs unconfirmed by urine culture.

Haematuria: Blood in the urine either visible (macroscopic haematuria) or invisible (microscopic haematuria).

Pyuria: Is defined as the presence of leukocytes (or otherwise known as pus cells) in the urine and suggests that inflammation exists in the urinary tract. Polymorphonuclear leukocytes are the predominant cell type in urinary tract infections. Causes are many and pyuria can still be seen in urine tests weeks after treatment.

Uncomplicated UTI: This refers to infection of the urinary tract by a usual pathogen in a person with a normal urinary tract and with normal kidney function.

Complicated UTI: This occurs where anatomical, functional, or pharmacological factors predispose the person to persistent infection, recurrent infection or treatment failure - eg, abnormal urinary tract.

Urosepsis: Urosepsis is a systemic reaction of the body to a bacterial infection of the urogenital organs with the risk of life-threatening symptoms including shock

Presentation

A UTI can present with a range of symptoms, or the patient may be totally asymptomatic and diagnosed only on routine dip testing. The presenting symptoms will vary with the age and sex of the patient and also with the severity and site of the infection. These may include:

1. Urinary frequency
2. Painful, frequent passing of only small amounts of urine
3. Dysuria
4. Haematuria
5. Loin pain / tenderness
6. Foul-smelling ± cloudy urine
7. Urgency
8. Urinary incontinence
9. Suprapubic pain / tenderness
10. Rigors
11. Pyrexia (remember, not all elderly will be able to have a temperature response to infection. The client can also present ayebile or hypothermic.)
12. Nausea ± vomiting
13. Acute confusional state - particularly elderly patients. Beware of the aged client who may have confusion as a normal part of daily living.

Classic symptoms of UTI generally include dysuria, frequency of urination, suprapubic tenderness, urgency, polyuria and haematuria.

Lower UTI versus upper UTI

It has been suggested that the clinical difference between upper and lower UTI cannot be diagnosed on symptoms alone, unless the patient has well defined loin pain and or tenderness.

Vaginal discharge

If vaginal discharge is present, the probability of bacteriuria falls. Alternative diagnoses such as sexually transmitted diseases (STDs), and vulvovaginitis, usually due to candida are likely and pelvic examination maybe indicated.

Differential diagnosis

In women, symptoms mimicking UTI may indicate urethral syndrome (but no recognised urinary pathogen cultured from urine or any other objective finding of urological abnormality) or atrophic vaginitis (is very common in postmenopausal women due to the falling levels of oestrogen) and, in men, benign prostatic hyperplasia.

Children

In infants and children, features are often non-specific (eg. fever, irritability, poor feeding and vomiting). More specific features may include loin or abdominal pain, frequency and dysuria. These are often absent in younger patients.
Some children with UTI may look quite well, while others may appear very unwell. Examination is often normal other than the presence of fever. Loin or supra-pubic tenderness may be present.

**Pathology**

**Dipstick**

*Note: A (-) neg dipstick result does not preclude bacteriuria being present.*

Common markers indicating a UTI are, (+) pos leucocytes, (+) pos nitrates and (+) pos blood. If testing from a MSU sample, remember that this sample is sterile and the dipstick should not be inserted directly into the sterile container. Use a sterile syringe to obtain a sample and then drop onto the dipstick.

A combination result of positive leucocytes and nitrates in a number of referencing material and studies suggest a higher confidence interval in determining a UTI in adults, than a singular (+) pos result of either Leucocytes or Nitrates. A (-) neg dipstick test for both leucocytes and nitrates is a good indication of the absence of a UTI in a healthy adult.

The use of a bedside dipstick test (in particular for females <65yrs) is of use. The use of a dipstick test in the elderly in the community, RACF and hospital is considered to be of less value. Some studies recommend that dipstick testing for UTI in the RACF not be done; rather a MSU should be obtained if symptomatic of infection. On the other hand, a dipstick test that shows a (-) neg to leucocytes and nitrates, again may be a good indicator of non-infection. Having stated this, asymptomatic bacteriuria has an incidence of 50% in the RACF population. A number of protocols for RACF in the treatment of UTI discouraged the use of dipstick testing as this led to inappropriate pathology requests and unnecessary antibiotic intervention. As a patient ages the finding of leucocytosis is less common.

In catheter patients (IDC or SPC) the use of dipstick testing for UTI is considered to be of little value. Long term catheter patients are considered bacteriuric with often two or more organisms. The IDC or SPC provides a focus for biofilm formation.

**Recommendation**

Use of the dipstick in the community (particularly females <65yrs) is considered appropriate. A test (+) pos leucocytes and nitrates +/- blood is suggestive of a UTI. The use of a dipstick in a patient with an IDC or SPC and should not be relied on as the only indicator of infection, and is not recommended. The use of the dipstick in RACF is not a reliable tool and should not be relied on as the only indicator of infection.

**Mid Stream Urine and Catheter Stream Urine**

A MSU/CSU is a mid stream urine specimen obtained into a sterile container at least 10mls to 20mls. Ensure that the patient cleans the vulval meatus or glans and meatus of the penis. You are required to complete the information on the sterile container. You are also to complete the information on the pathology form and attach the sticky label with the patient’s details onto the sterile container. This is bar coded and has the patient’s name which will reflect the same information on the pathology form and the sterile container.

Testing required is Microscopy, Culture and Sensitivity written as MC&S.

**Microscopy**

A white blood cell count (WBC) of greater than 10 WBC per microliter (>10L or 10,000,000/L) is a sign of inflammation and over >10L is considered to be a sign of infection

**Culture**

Where bacterium or bacteria are present a count >105 colony forming units (CFU)/mL is significant of a UTI. But UTIs can occur at lower counts and diagnosis is based on symptoms5. The Australian Prescriber8 states “midstream urine is considered clinically positive if there are more than 102 colony forming units (cfu)/mL in acute uncomplicated infections in women. In complicated urinary tract infections, more than 105 cfu/mL in a midstream sample of urine in women and more than 104 cfu/mL in men or in an in-out catheter urine in women are clinically significant. There is usually an associated pyuria (>100 white blood cells/high power field). Contamination of the sample with epithelial cells is indicative of poor collection technique”.

From a conference presentation Warner6 considers that “Bacteriuria is considered to be the definitive marker of UTI. In studies from 1950’s 105 cfu/mL of bacteria were indicative of infection, but we may miss UTI’s with lower levels 102 to 104 cfu/mL.”

**Sensitivity**

Where “Biochemical tests are used to identify which bacteria are present and susceptibility testing is done to identify antimicrobial agents that are likely to inhibit the growth of the bacteria. The results of these laboratory tests allow the physician to select the best antibiotic treatment to resolve the infection”6.

**Recommendation: When to order a MC&S.**

There is quite a bit of diversity of opinion on the subject of when and on whom to collect a MSU, that is required to be sent to the lab. According to Dr Morgyn Warner, a clinical microbiology & infectious diseases consultant at SA Pathology in SA, he states that urine testing comprises >80,000 urine specimens per year (>200 per day) comprising 35% of the microbiology workload; and it is the single largest item in 65% of private practitioners.

Warner in 2009 also suggests that a culture should be ordered when a patient presents with:

1. Symptoms suggestive of infection (dysuria, frequency)
2. Suspicion of complicated infection (upper tract, fever)
3. Atypical symptoms
4. Failure to respond to initial therapy
5. Recurrent symptoms <1 month after treatment for a previous UTI not cultured

Warner in 2009 also recommends that a culture should not be ordered for asymptomatic young women with pyuria = treat empirically without culture.7

In asymptomatic patients, a MSU for a MC&S is not considered useful and may lead to inappropriate antibiotic use.

**IDC and SPC**

It is not recommended to gather a MSU for a MC&S unless the patient has signs of clinical sepsis.

Do not take a sample from a leg bag or a non flushed catheter, as both will have bacteria associated with them.

**RACF**

MSU for MC&S should only be collected if the patient is showing two or more signs of infection.

1. frequency
2. dysuria
3. haematuria
4. fever
5. loin pain
6. supra pubic pain

Cloudy and smelly urine alone does not warrant a MSU with a non symptomatic patient.

Routine ordering of microbiological tests is not always practical in the RACF setting. This reflects difficulties in obtaining specimens, the involvement of multiple laboratories servicing these institutions and the lack of timely results that inform prescribing. In addition to difficulties in clinical diagnosis, the lack of clinical cultures also hinders the monitoring of antimicrobial susceptibility trends among this population. Accordingly, alternative approaches such as periodic surveillance of antimicrobial resistance patterns may be more feasible in this setting.8
4. If the patient hasn’t started ante natal care, whether she has a UTI
3. For Amoxicillin clavulanate a consult with the GP is required.
4. Asymptomatic bacteriuria should not be treated.
3. Encourage fluid intake for flushing of bladder.
2. In uncomplicated UTI, Trimethoprim is used for 3 days for initial
   treatment, not 7 days.
4. Change long term IDC or SPC prior to starting antibiotics for
   symptomatic UTI.
5. Sepsis may be the only indicator of UTI.

Females
1. In pre or peri menopausal patients a pregnancy test is recommended.
2. In uncomplicated UTI, Trimethoprim is used for 3 days for initial
   treatment, not 7 days.
3. Encourage fluid intake for flushing of bladder.
4. Asymptomatic bacteriuria should not be treated.

Pregnant patients
1. An MSU is taken prior to starting empirical treatment.
2. Trimethoprim is contra-indicated in the first trimester of pregnancy.
3. For Amoxicillin clavulanate a consult with the GP is required.
   a. In view of childhood outcomes – (ORACLE II trial and 7 year
      follow-up), which showed an associated increase in necrotising
      enterocolitis, functional impairment (low), and cerebral palsy, it
      is recommended that amoxicillin/clavulanate is only used if no
      alternative treatment is available. Note that in the Therapeutic
      Guidelines antibiotic is contradictory in this area; it supports
      the use of amoxicillin/clavulanate as a third option category
      B1, as does Murtaghs', and WA Health O&G Guidelines.11
4. If the patient hasn’t started ante natal care, whether she has a UTI
   or not, collect MSU for a MC&S and refer to her GP or register her
   with a GP.
5. Asymptomatic bacteriuria should be treated in pregnant patients.
   The benefits are outweighed by the risks.
   a. The persistent bacterial colonisation of the urinary tract
      (usually by Escherichia coli) without symptoms is common
      in pregnancy. While asymptomatic bacteriuria in non-
      pregnant women is usually benign, in pregnancy it increases
      the likelihood of kidney involvement (pyelonephritis), with an
      incidence of around 30% in affected women.

Males
1. All men should be referred to a GP if UTI is suspected, as there
   could be involvement of the prostate or epididymis. It is also a
   good opportunity for a PSA blood test for prostate cancer.
2. If empirical therapy is required whilst waiting for investigation
   results, Trimethoprim daily for 14 days is usually the first choice
   antibiotic as it is effective against UTI's. Though some GP’s I have
   consulted with have preferred cephalaxin as their first choice,
   most likely due to its moderate spectrum of antimicrobial activity.

RACF
1. Aged care clients should be considered to be at significant risk of
   chronic dehydration as part of their assessment.
2. Renal failure should be considered.
3. Patients who are systemically well but have 2 or more mild signs
   of UTI may be able to wait for MSU results prior to being placed
   on antibiotics. Fluid encouragement and awaiting results may a
   reasonable course of action prior to considering antibiotics. This
   may resolve the problem.
4. Cloudy urine and smelly urine alone does not indicate a
   UTI so encourage increased fluid intake for 24 hours. Again
   subcutaneous infusion of fluid may be helpful.
5. Good assessment is required as the traditional use of dipstick,
   smelly urine, cloudy urine and confusion as indicators of UTI can
   be misleading in diagnosis.

IDC and SPC
1. Do not treat catheterised patients with asymptomatic bacteriuria
   with an antibiotic.
2. Do not rely on classical clinical symptoms or signs for predicting
   the likelihood of symptomatic UTI in catheterised patients.
3. Do not use dipstick testing to diagnose UTI in catheterised
   patients.
4. Change long term IDC or SPC prior to starting antibiotics for
   symptomatic UTI.
5. Sepsis may be the only indicator of UTI.

Fluid resuscitation for dehydration
The discussion of fluid resuscitation of the varying age groups is
outside the scope of this article. In short though, fluid resuscitation
for dehydration, particularly of the elderly and those who are unable
 to hydrate orally is of benefit. Always remember that any patient in
a RACF is potentially chronically dehydrated and that your clinical
assessment should take this into account.
Two types of fluid resuscitation for dehydration are intravenous
and subcutaneous. This choice is up to the practitioner after careful consideration of the clinical assessment, support staff
available, the time you can spend with the client and other factors
influencing your decision making process. Education of RACF's in
the use of SC infusion may be of value, particularly if you start to
have a relationship with the staff as my colleagues and I did in our
catchment area.
The use of subcutaneous (SC) infusion in RACF's can be of value
and should be considered. RACF's can be quite short staffed and
can find the use of IV fluid resuscitation a challenge if not supported
by outside practitioners, even then this can be a challenge for the
practitioner due to time pressures, the clinical condition of the patient
and a variety of other factors. To give an example, an elderly client
that I attended with quite significant CCF as one of his co-morbidities
was given only 200mls IV with continuous cardiovascular assessment
was given 200mls IV with continuous cardiovascular assessment.

Is Cranberry effective in the treatment of UTI ?
It appears that there is a variety of opinions in the viability of cranberry
(juice/capsules) reducing the incidence of UTI, particularly in the age
of antibiotic resistant bacteria. A number of research projects have
looked at the ability to have a viable alternative to the use of antibiotics
in UTI. The over use, inappropriate use and poor compliance by
consumers of antibiotics is leading to multi resistant bacteria, in
particular that of urospore. “Sepsis is one of the leading causes of
death in hospital patients worldwide. It causes more deaths than
prostate cancer, breast cancer and HIV/AIDS combined. There are
approximately 15,000 episodes of severe sepsis and septic shock in
Australian and New Zealand intensive care units per year.”112.
As previously mentioned, the major infection group I saw were UTIs, including many Urosepsis. UTIs are very prevalent in Residential Aged Care Facilities (RACF) rather than the same elderly group at home. It is most likely due to the fact that the elderly in their own home are more likely to consume more fluid and thus maintain hydration and have greater urine production which assists to flush out the bladder. But also may be able to maintain a better standard of personal hygiene and physical exercise. There was a long standing historical view that decreasing urine pH by cranberry juice helped in the reduction of UTI by benzoic acid, which is excreted as hippuric acid in the urine which prevented bacterial growth, but this is no longer considered valid.

E.Coli adheres to uroepithelial cell walls and it is believed that cranberries inhibit this E.coli adhesion. Cranberry juice has been shown to reduce the biofilm load of both Gram-negative and Gram-positive bacteria on the uroepithelial cells in Spinal Cord Injury patients, particularly patients with a high Glomerular Filtration Rate (GFR) who seemed to received the most benefit. 13

A study by Barbosa-Cesnick, et al14 found that young female college students who were diagnosed with a UTI and were divided into a cranberry juice group and a placebo group, had no reduction in recurrent UTI. This is supported by another review that states there is very limited evidence from clinical trials supporting the use of cranberry juice,15

A study in the prevention of recurrent UTIs in older females >45yrs of age, with a low dose trimethoprim group (this being the first line antibiotic generally given for UTI’s) and cranberry capsule group, found that there was no statistical difference between the groups over a 6 month period. The study concluded that it may be reasonable for a patient to use cranberry as an alternative therapy in UTI rather than trimethoprim, as Cranberry is well tolerated by the body compared to that of trimethoprim.16 “A recent study showed that regular consumption of cranberry juice was also effective in cases in patients with UTI caused by antibiotic-resistant bacteria. Urine samples obtained from healthy volunteers who drank cranberry juice prevented uropathogenic E. coli isolates from adhering to isolated uroepithelial cells in bioassays. The antiadherent effect started within 2 h and persisted for up to 10 h after ingestion”17

So do you recommend cranberry juice / capsules or not? A number of authors concluded that at worst cranberry juice was not harmful, and at best it may have an effect on UTI’s. As chronic dehydration of the elderly is a major issue (particularly in the RAOF), the encouragement of the consumption of cranberry juice in the prevention of a UTI may help with maintaining hydration and flushing of the bladder.

Conclusion

We sometimes give very little thought about UTI’s in pre-hospital practise. Having worked the last 28 years in NSW, QLD and now the SA Ambulance Service, I have only recently been taught or have done research into this common disease. Even as a lecturer in SA Ambulance Service (not so long ago), when I was teaching Aged Care, UTI’s did not feature particularly in the course objectives.

Our major client group in the pre-hospital area is the elderly, and this will only increase as the population increases. UTI’s are one of the major infection groups you will deal with and if not diagnosed and treated can lead to a septice patient who will have an increased risk of morbidity and mortality. This means more bed time in hospital and in particular a HDU or ICU bed with preventable increased cost to the health system.

References:
27. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3575202

About the Author

After leaving the Army in 1986 Michael joined the NSW Ambulance Service. He then joined Queensland Ambulance Service in 1992 and following this went to SA Ambulance Service in 1995 where he is presently employed. Michael is an Intensive Care Paramedic and Clinical Team Leader living and working in the south-east of South Australia. He was also a member of the Limestone Coast Extended Care Paramedic project team during 2012-2014.

CPE Program

Complete the questions and collect your CPE points

1. Why is it important to understand the physiology response to infection of all age groups, in relation to using a thermometer as part of your clinical assessment?
2. How do you assess dehydration for all age groups? In particular, how do you then consider that would affect decision to infuse fluid, amount, site?
3. What are the classes of antibiotics? Which ones are penicillin (thinking of penicillin allergy here), which ones are the most common to use in UTI?
4. The Case: The patient, with a long term ICD in a RACF who has a good advanced care directive in your state. The patient doesn’t wish to go to hospital and the family doesn’t want the patient to go to hospital. The patient presents with a Urosepsis and you can’t contact a Doctor. So how do you treat this patient? The patient has a history of UTIs and Urosepsis with hit and miss success with antibiotics (sometimes trimethoprim works, sometimes it doesn’t). In your answer you need to be lateral in your thinking process. Consider such things as antibiotics therapy and failed antibiotic therapy, fluid therapy, pathology, care instruction, referral, progression of disease.
5. Why does trimethoprim come in a box of 7 tablets?

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

With thanks to Michael for providing these questions with his article!
Registration of Paramedics

Paramedics undertake high risk clinical health interventions yet remain unregistered and ungoverned by the national scheme that regulates health practitioners. The Australian Health Workforce Ministerial Council recently decided to defer the decision to include paramedics as part of the scheme until sometime in 2015. That has been discussed by Ruth, in some detail at http://blogs.crikey.com.au/croakey/2014/11/07/why-aren%E2%80%99t-paramedics-registered-2/

National professional registration allows for the establishment of national education standards, professional codes of conduct and practitioner disciplinary measures. These help to ensure the delivery of quality care to patients as well as an ability to restrict or suspend the practice of impaired or under-performing practitioners. National registration is also of benefit to practitioners. It allows for transferable qualifications so people can move from job to job, and it recognises registered practitioners as independent professionals who have obligations to their patients, the profession and their employer.

In 1995, the Australian Health Ministers’ Advisory identified criteria that must be considered when deciding whether a currently unregulated health profession should be subject to professional registration. Those criteria include whether the occupation would be most appropriately managed by a health minister, whether the occupation poses ‘a significant risk of harm to the health and safety of the public’ and whether existing regulation provides adequate protections.

Ambulance services fall within the responsibility of the Minister of Health in most Australian jurisdictions. In the ACT the Ambulance Service falls under the responsibility of the Minister for Police and Emergency Services. There is no regulation of paramedics in either Western Australia or the Northern Territory.

In 2012-2013 paramedics in NSW provided 1,219,262 responses (both emergency and non-emergency). The care that they provide includes placing instruments into a body cavity, administering scheduled drugs by injection, managing labour or delivering a baby, and commonly requiring patients to disrobe. These procedures all pose risks to those in need of care. The nature of the work and the access to scheduled drugs also increases the risks to paramedics of developing a drug dependence or mental health condition that can create an impairment in the practitioner and which can also pose a harm to the patient.

In the absence of national registration, the states are beginning to move on their own. In Tasmania a paramedic must be an employee of Ambulance Tasmania, a recognised interstate ambulance service or a person approved by the regulations. Across Australia there are at least 122 permanent private sector employers of paramedics, over half of whom work across state boundaries. Regardless of their skill or qualifications, they cannot use the title ‘paramedic’ in Tasmania without approval from the Commissioner.

In South Australia the parliament has amended the Health Practitioner Regulation National Law (South Australia) Act 2010 (SA) to restrict who can call themselves a ‘paramedic’. A person must hold a prescribed qualification to use the title but that will not stop or limit the care that unqualified people can give, just the title that they may adopt. The national registration of health professionals has been achieved by each jurisdiction passing complementary legalisation. Amending the South Australian Act suggests the start of divergence between the jurisdictions; something that constantly bedevils attempts at cooperative national schemes.

Victoria has announced that it will move to a state based registration scheme. To that end the Department of Health has released an ‘exposure draft’ of the Paramedics Registration Bill 2014 (Vic).

The Bill provides for the establishment of the Paramedics Board of Victoria. The Board is to develop standards that must be met before a person can be registered as a paramedic but those standards must be approved by the Minister. The Board can also set Codes and Guidelines that apply to paramedic practice.

These Codes and Guidelines must also be approved by the Minister if they ‘may have an adverse impact on the recruitment or supply of paramedics to the workforce’. This is significant as Ambulance Victoria is likely to remain the largest employer of paramedics in that state. Any registration requirement that could restrict the ‘recruitment or supply’ of paramedics, even if justified on clinical or community safety grounds, would have an impact on Victoria Ambulance (and others) ability to employ sufficient paramedics to meet their service needs and patient demand. It is up to the Minister to ensure that the Victoria health service is able to provide a service to Victorians but registration standards that could affect his or her ability to secure a supply of paramedic employees would be problematic.

These Victorian proposals are different to the national registration of other health professionals. For example the Health Practitioner Regulation National Law (Victoria) Act 2009 requires health boards to refer standards and codes to the Ministerial council for approval but it does not allow the Ministerial Council to reject the recommended standards or code if it would restrict the supply of registered professionals.

The Victorian Bill appears to anticipate a coming right to private practice:

1. Registered paramedics will be required to hold professional indemnity insurance. This is new as currently all paramedics must be employed in order to practice. It is their employer who determines their scope of practice and has the necessary authority to carry and use drugs. As employees it is their employer, and most often that will be Ambulance Victoria, that will be liable for any negligence or malpractice. An obligation to carry personal insurance implies that they will be acting on their own, independent scope of practice.

2. A paramedic will be required to report to the Board if ‘the paramedic’s billing privileges are withdrawn or restricted under the Human Services (Medicare) Act 1973 of the Commonwealth…’ Paramedics do not, currently, have ‘billing privileges’ under the Human Services (Medicare) Act 1973 (Cth) but it is clearly anticipated that this may happen.

3. The Bill has specific provisions dealing with the conduct of businesses that provide paramedic service. A person will be able to, unless prohibited from doing so, conduct and advertise a business that provides paramedic services and conduct practice from a ‘facility from which health services are provided’.
A right of private practice is consistent with the principle of registration, if one is going to be registered then community safety is maintained through the registration and disciplinary provision and with professional indemnity insurance to provide redress in the case of negligence.

If the Bill is passed, the need to restrict paramedics to employment and in particular employment by Ambulance Victoria is lost. It may be that the Department of Health and Ambulance Victoria will move from being an ambulance service provider to an ambulance service regulator.

To the extent that the Victorian Bill models the national scheme, it raises issues of unnecessary duplication that national registration is meant to avoid. Should the other jurisdictions move down a similar path paramedics may need to register in multiple jurisdictions and there would need to be systems to allow cooperation between registration authorities to share information so paramedics who are disciplined in one jurisdiction cannot simply move to another.

In all other jurisdictions anyone can call themselves a paramedic, even if their only qualification is a two-day first aid course. This is the case even though there are a growing number of universities offering three year degree programs that are endorsed by the Council of Australian Ambulance Authorities.

State attempts to regulate the paramedic profession will go some way to reassuring the community that when they see an ambulance, or a uniform marked ‘paramedic’ that the person in that ambulance or uniform is a competent trained professional. Unfortunately the state based schemes cannot provide the quality assurance process of a national scheme and will create barriers to a flexible workforce and patient protection; the sort of barriers that a national scheme is intended to overcome.

It follows that the paramedic profession is appropriately managed by the relevant health ministers, it is an occupation that poses a risk of harm to patient safety but it remains largely unregulated and what regulation there is, is becoming increasingly inconsistent. In the circumstances the profession is a prime candidate for national registration.
I never used to have much to do with paramedics as a junior doctor. It was only when working in the ED as a registrar that I was exposed to them…probably a good 3-4 years into my postgraduate medical career. Even then, I had little idea of the challenges they faced, despite being in the same business of managing trauma, critical illness.

But of course with the usual pressures in ED (access block, running at 120% capacity, begging for appropriate consults and dealing with all the usual stresses of staffing and supervision) it was easy to just bemoan the fact that patients were dropped off covered in gravel from the roadside and possibly some time after the incident.

In short, as an ED reg starting off, I had little idea of the challenges posed by the prehospital paramedics. And it was easy to criticise. If that was my mindset, just think of that of the rest of the hospital! Nothing could be further from the truth. Fastwind forward a decade. I’ve spent a lot of time in medical education, instructing (and directing) on the international ‘advanced trauma life support’ aka ATLS (EMST in Australasia).

In fact the full name of this course is “ATLS Course for Doctors” – it remains medico-centric and is a product of the College of Surgeons it is no secret that I am a critic of this course – it fulfills a need for entry-level, but doesn’t really deliver modern trauma care, hence the proliferation of other courses such as ATACC and ETM course.

The usual stereotypes of (shudder) just ambulance drivers no doubt predominate in some medics mind when I trained … and I suspect this attitude still exists, as some of my paramedic mates refer to themselves (self-deprecatingly) as ‘just an ambulance driver’. So along my postgraduate career and in time as a medical educator, I have tried really hard to do the following:

• to understand and explain to doctors who I train about the valuable skills of paramedics/prehospital
• to seek to break down traditional silos between different providers, such as paramedics and medics
• to use simulation training to improve delivery of care in resus

My mission continues – part of the reason I am rotating through medSTAR is to pick up pearls from prehospital care, simulation and standardisation of training, as well as case audit and governance.

Even as a seasoned doctor, I make an effort to go on other courses relevant to resus – some of which are geared specifically towards the prehospital environment (eg: STAR). But it is still rare for medics to cross train with paramedics and see how they do it.

Enter the Sim Environment…

This program is an intense three week course of lectures and scenario testing for the intern intake, designed to help equip term before “hitting the road”.

I was only able to make it for one day – but can report that I was blown away with both the quality of simulation delivered AND the clinical skills of the paramedic interns. My host was former nurse and current paramedic educator, Michael Borrowdale.

Michael proudly showed me around the SA Ambulance training facility (refurbished office spaces) which were cleverly kitted out on a shoestring budget to mimic indoor environments including patient homes, nursing home, resus bay and crew room/stock cupboard.

Furniture was sourced from donations and clever use of curtains to change wall appearance allowed the same room to function as a bedroom or a resus bay, a bathroom or a lounge room. Cheap video cameras from DickSmithElectronics allowed recording of the scenarios to linked PC, for under $100.

Pre-painted furniture on the back wall can be concealed by a curtain printed with resus room paraphrenalia, rapidly converting the room format.
Attention to the little details adds to the fidelity of simulation—having webster packs, ID cards and the like adds valuable clinical information (organ donor, medications). And for immersive sim, use of sight, sounds, and even smell contributes hugely.

Live actor, realistic faeces, overpowering smell from ‘liquid ass’ spray creates realistic immersive sim... in a cramped bathroom space.

I watched four different sims, each run in ‘real time’, requiring the candidates to manage the condition from arrival to disposition, with varying levels of complexity.

Use of a mix of live patients and mannikins, along with students role-playing relatives, nursing staff or police officers added to the realism and encouraged skills in scene management and situational awareness.

I was impressed that candidates had to manage the scenario from arrival and initial assessment, maintaining communications with HQ, instituting immediate management, calling for backup, dealing with distressed relatives, environmental concerns, extricating the patient, dealing with unexpected crises (sudden desaturation), loading patient, transporting via ambulance and handover to ED.

Debriefing – I am not a fan of Pendleton’s ‘shit sandwich’ approach, preferring instead the Plus/delta approach (what went well?, what would you change?).

The SHARP tool seems reasonable too... although candidates tend to focus on what went badly when asked “How did it go?”

Each scenario ran for about 30-45 minutes and was expertly debriefed by experienced facilitators with plenty of roadcraft experience. Crews were split and sim continued even after patient departed, with remaining crew having to clean up, deal with relatives/media/police and both teams write up case cards.

“Commotio cordis” paediatric VF arrest – unfortunate incident with a cricket ball.

Involvement of patient relatives and outside agencies such as police, mean that prehospital workers have to develop excellent situational awareness and scene management, on top of clinical management priorities.

Despite being involved in running trauma sims via ATLS/EMST, running my own ‘guerilla sim’ and attending other courses in resus/prehospital care here in SA and interstate, I can say that I have NEVER seen such a high level of immersive simulation. Sight, smell, sound and sheer cognitive overload from various players (distraught relatives, police, press, carers and assorted players created a level of sim I’ve never experienced before).

Throughout this, the paramedic interns displayed effective clinical skills and excellent crisis resource management.
“To put it bluntly, I have never seen this level of immersive simulation in ANY of my medical career, despite running and attending sessions focussing on resus training. Nor have I been privileged to witness the level of clinical skill displayed by the paramedic interns at such a junior level.”

After witnessing this sim training, I am fully confident in the skills of the paramedic interns – as they progress through the ranks, skills will be further fine-honed. I hope that other prehospital workers, whether career crews in metro or volunteer crews in rural, will be able to undertake the same exposure of sim training.

I could not help but reflect that I wish that doctors had access to the same level of immersive sim – in fact, one could argue that even established senior doctors would benefit from participating in such well-organised, immersive and stressful simulations – rather than the usual token ‘stop-start’ sim. This applies whether preparing for prehospital work or for ongoing training in hospital-based work.

Recommendations for the future?

People may not be aware, but the number of graduate paramedics churning out of university each year vastly exceeds the number of available spaces. Unemployment is a real possibility for these graduates. Even the interns who do get a spot are only secure for a year – they are not guaranteed a longterm position and many seek work interstate, overseas or in other industries (mining, oil rigs etc). Meanwhile rural areas are mostly dependent on (unpaid) volunteers, trained to a Cert IV level but lacking skills such as cannulation etc. Not an easy balance between affordability, case load and number of graduates to positions. I don’t have an answer for this!

But if we are serious about clinical training, I think we need to get away from tokenistic, task-trainer focussed sim or ‘tick box’ annual ACLS updates, moving instead towards highly immersive sim delivered in real time, using realistic scenarios backed up by actors, and use usual equipment. An ideal training facility would be co-located with emergency services, allow cross-training with other agencies (paramedics, medics, retrieval, fire service, SES etc). Ability to deliver sim to outlying sites would be useful.

But ultimately, Michael Borrowdale and colleagues prove that one can run highly effective, fully immersive simulation on a shoestring budget, with fully realistic sound, smell, touch and the cognitive stressors of scene management including dealing with highly distressed relatives, environmental concerns (rain, cold, sun) and from scene arrival to patient delivery.
The birth of a child is generally a time of great happiness. It’s not until the realisation of sleepless nights and changing nappies for the next 3-4 years kicks in that the gloss of a new member of the family starts to wear off. For the vast majority of women and their babies (in the western world) labour and delivery is a relatively safe and medically uneventful process. However this is not always the case.

As an ambulance service we may become involved in labour and the delivery process for a number of reasons. Concealed or unknown pregnancies can result in generalised abdominal pain becoming something unexpected in a relatively short period of time, premature labour may result in early delivery or a pregnant woman may just leave their departure for their planned place of delivery a little bit late and get caught short. Another group of woman we may encounter are woman who are having a planned home birth but run into complications requiring transport to hospital. Any of these may result in us attending a labouring woman and becoming an integral part of the delivery or the post-delivery care.

In some of these situations it is important to consider clinical back-up depending on how the job progresses. Although generally everything will progress smoothly, in situations where it doesn’t we may end up with having to manage two patients (mother and child) and in those circumstances extra hands will be greatly appreciated.

Preparation for Delivery

If delivery is imminent either in the woman’s residence or in the back of the ambulance there are some important factors to consider.

1. General approach to the patient and to the situation

While on the inside we may be anxious and feel stressed it is important that our outward demeanour is one of control and reassurance. Regular communication to the patient and any family members that are present is important and is good for the situational awareness of our colleagues who are with us at the case. In reality this is true for all the situations we face.

2. Ensure the clinical environment is as warm as possible

Put the heaters on in the ambulance. Newborns lose heat very quickly and ensuring the environment is warm will go some way to preventing that.

3. Ensure that suction is functioning well and ready to go with soft catheters available

Newborn suctioning doesn’t need to be done routinely but if the baby is struggling with clinical signs consistent with meconium aspiration then this should be undertaken. Beware deep blind pharyngeal suction as it may cause vagally induced bradycardia and laryngospasm.

4. Dry towel ready

Dry and stimulate the infant with the towel as soon as it is delivered. Use a second one to wrap the baby in after it has been dried and is crying or breathing normally.

5. Woollen bonnet

Place on babies head after drying. This will also go some way to helping prevent heat loss.

There is often a lot of angst over when is the right time to clamp and cut the cord. In the uncomplicated term delivery (>37 weeks gestation) delaying this for a minute or two after delivery will ensure the newborn will have improved iron status and in pre-term (<37 weeks gestation) babies it will increase the babies blood pressure during stabilisation, decrease the risk of intraventricular haemorrhage and the likely need for blood transfusion. Delayed clamping will however increase the likelihood of needing phototherapy for jaundice.

In the compromised newborn the optimum time for cord clamping is unknown. Suffice it to say resuscitation should take precedence over delayed cord clamping.

Neonatal Assessment

Formal APGARS, while the traditional post-delivery assessment measures, are of little use for assessment in the immediate post-delivery phase as a guide for the need to resuscitate baby. Key assessment features initially are babies tone (good, reduced, floppy), breathing (adequate, inadequate, absent), and heart rate (>100, 60-100, <60). These key features will help guide any neonatal resuscitation that may be required.

Once baby has been dried and adequately assessed then it should be placed on mum’s chest encouraging skin-to-skin contact with both mother and baby being well wrapped to manage temperature control. If the woman is not a first time mother then she may be keen to initiate breast feeding at this time.

This should be encouraged but is not an absolute requirement. New mothers may find this a little more difficult and as a consequence there is no need to put an emphasis on breast feeding at this stage.

Safe transportation at this time is important. It will be impossible to place a newborn in any sort of restraint device and the best place is on Mum’s chest to maintain a degree of heat control whilst ensuring that Mum at least is adequately secured.

Delivery of the placenta will occur next and is generally a spontaneous process. When the cord has lengthened, associated with a small gush of blood, delivery from the birth canal can be encouraged with very gentle traction on the cord, while maintaining firm pressure on the lower abdomen to help prevent inversion of the uterus.

If any resistance is felt then traction should be ceased. It is important that the placenta is bought with the mother to the hospital as it will need to be inspected for completeness to ensure there are no components left behind in the uterus.

This article was originally prepared and published in the SA Ambulance Service magazine, SAAScene titled ‘A Moment with Mazur’. Stefan Mazur is SA Ambulance Service’s Chief Medical Officer and has kindly given permission to publish his article in Response as well.

Stefan Mazur

Pregnancy, Labour and Delivery

Vol 42 No. 1 – Autumn 2015

Response
Once the placenta is delivered it is good practice to feel the uterus through the abdominal wall and to undertake some uterine rubbing to help it contract fully.

Post-Partum Haemorrhage

Now attention turns to potential postpartum complications with post-partum haemorrhage (PPH) concerns to the fore. PPH is defined as the loss of greater than 500mls of blood immediately postpartum and is associated with significant morbidity and indeed mortality when it occurs. Prolonged labour, multiparous females, large babies and retention of the placenta or parts of the placenta all place woman at risk of this obstetric emergency. If PPH is occurring or at risk of occurring it is important to obtain reliable large bore IV access.

Causes of post-partum haemorrhage are often simplified down to the 4 Ts:

**Tone** – atonic uterus which is not contracting post-delivery.

**Tissue** – retained placenta or parts of the placenta which have not been expelled and are preventing the placenta from contracting completely.

**Trauma** – some kind of tear in the delivery canal which is bleeding.

**Thrombin** – probably the most feared, the development of a coagulopathy due to a form of disseminated intravascular coagulopathy (DIC) meaning thrombin is not being adequately formed to encourage clot formation.

By keeping these causes in our minds we can approach our management options in PPH in a relatively systematic way. Uterine contraction should be encouraged by trying to rub up uterine contraction by vigorously stimulating the uterus through the lower abdominal wall. Ensure that the placenta has been delivered as per above and remove any aspects of it that you locate in the birth canal.

Inspect the birth canal as well as you can to try and identify any areas of tearing or lacerations which may be bleeding. Attempt to control these with direct pressure. Large amounts of crystalloid will have a tendency to make any coagulopathy worse so it is important that enough fluid is given to maintain a degree of cerebral perfusion without giving so much that the patient becomes significantly haemodiluted and that any potential DIC is not made significantly worse.

Disposition

Early notification to the receiving hospital of the patient’s arrival will allow them to have syntocinon ready to administer as well as other uterine tocolytics. The hospital will also be able to notify blood bank to have Packed Red Blood Cells available as well as clotting factors such as fresh frozen plasma, cryoprecipitate, fibrinogen and platelets. The administration of tranexamic acid is often considered in these situations as well. Operating theatre staff will also be able to be put on standby if the need for emergency hysterectomy is thought to be a possibility.

Summary

The arrival of a new born baby is one of the great moments in any family’s life. It is important that we do the best we can to ensure that remains the case, by ensuring safe delivery of the baby, appropriate neonatal assessment and resuscitation if required, and appropriate post-delivery care of both mother and child.
**Abstract**

**Aim:** To review the current literature relating to fever, febrile seizures (FS) and paracetamol, with the aim of developing a better understanding of fever and FS, and to determine if paracetamol has a role to play in the prevention of FS.  

**Method:** Relevant literature was collected from online databases and online medical journals. These articles were then critically analysed and, together with textbooks and other online resources, used to investigate and determine the current views on fever and FS. Paracetamol was also investigated to determine if prophylactic administration could prevent the occurrence of FS.  

**Results:** Fever was found to have a beneficial role in fighting infection, and FS were found to be mostly benign occurrences. No evidence was found to support the hypothesis that paracetamol administration prevents FS in febrile children. Unexpectedly, strong evidence associating paracetamol with asthma and other respiratory complications was discovered.  

**Conclusion:** Paracetamol will not prevent FS if given prophylactically to febrile children. Paracetamol potentially has severe adverse effects and should therefore be withheld unless fever reaches dangerous levels.

**Introduction**

FS are common occurrences in children aged 3 months to 5 years, and it is estimated that 1 out of every 25 children in New Zealand will experience a FS1. A high fever or a rapidly rising temperature are commonly believed to trigger these seizures. This has led to the frequent administration of paracetamol to febrile children in the hope of reducing fever and preventing FS. This literature review examines the current literature relating to fever and FS, with the aim of exploring the common misconceptions surrounding fever, and to develop a better understanding of FS. Paracetamol is then investigated to determine if it has a role in the prevention of FS in febrile children.

**Fever Phobia**

The phrase *fever phobia* has been used since the 1980s to describe the unfounded fear parents have of fever2,3. Rather than a symptom of an illness, parents perceive fever as a life-threatening illness capable of causing seizures, brain damage or even death4. Medical practitioners often compound this fear by aggressively treating febrile children with antipyretics to reduce fever5,6.  

Many authors agree that fever is usually harmless, and that the degree of fever does not indicate the severity of a child’s illness2,3. Fever is in fact beneficial; raising the body’s temperature will kill microorganisms and prevent viral replication. Fever will also improve the body’s immune response, enhance phagocytosis, and increase the production of antiviral interferon5,7. Fever is a systemic response to invading microorganisms8. Chemicals called pyrogens are secreted by invading microorganisms, and by leukocytes once exposed to foreign substances in the body. Pyrogens cause the body’s thermostat located in the hypothalamus to be reset upwards, increasing the body’s temperature8,9.  

Normal temperatures in children range from 36°C to 37.9°C. A mild fever is between 38.0°C and 39.0°C, a moderate fever is between 39.1°C and 40.4°C, and a high fever is a temperature above 40.5°C.  

Temperatures above 41.0°C are considered dangerous fevers and are associated with brain damage6. Fevers in children are usually self-limiting and rarely reach dangerous levels5.  

In a qualitative study conducted by Demir and Sekreter (2012), 80 physicians in Turkey were questioned about their opinions of fever in children9. 65% of participants answered that fever is harmful to children, 70.7% answered that a temperature above 38°C should be treated with antipyretics, 85% believed that fever caused FS, and 90% indicated that FS can cause brain damage. The opinions expressed by Turkish physicians were similar to those of physicians in both Japan and Switzerland9,10. This demonstrates that fever is often misunderstood by physicians regardless of their cultural background.

**Febrile Seizures**

FS are defined as “a seizure occurring in a child older than one month during an episode of fever”, and are classified as simple or complex1,11,12. Simple FS account for up to 90% of all FS and are described as seizures that “last for less than 15 minutes, are generalized (without a focal component), and occur once in a 24-hour period”12(p1281). Simple FS are generally benign and there is no evidence that FS will lead to any long-term disabilities, even when the patient experiences a subsequent FS at a later date12. According to Wang (2011), children who experience simple FS have the same risk of developing epilepsy as children who do not have FS12.  

Complex FS are described by the Steering Committee on Quality Improvement and Management (2008) as seizures that “are prolonged (>15 minutes), are focal, or occur more than once in 24 hours”12(p1281). Children who experience complex FS have an increased chance of developing epilepsy later in life compared with children that have simple FS14. Reid, Galic, Teskey, and Pttman (2009) add that children, even after experiencing multiple complex FS rarely go on to develop any learning, behavioural or neurological disabilities15. Neither simple nor complex FS are associated with any significant increase in mortality16.  

Together with an elevated temperature, factors that contribute to FS are age, a family history of FS, the time of the year, and the type of illness. FS most commonly occur in children aged 3 months to 5 years, with peak occurrences happening at 18 months of age17. It is estimated that 1 out of 25 children in New Zealand will have a FS, and FS are 24% more likely to occur if there is a family history of FS1,18. FS most frequently occur at the end of summer and in the winter months, with upper respiratory tract infections being the most common causative agent of fever leading to FS19,20. Syndi Seinfeld and Pellock (2013) comment that FS generally occur within the first 24 hours of the onset of fever20.  

While the exact mechanism of FS is controversial, evidence suggests that the peak temperature is more significant than a rapid rise in temperature1,17,18. The theory that FS are caused by a rapid rise in temperature was based on animal tests. It was found that seizures could be induced in animals by rapidly increasing their body temperature by using an external heat source21. However, Van Zeijl, Mullaart, and Galama (2002) suggest these studies were flawed and that the mechanisms of fever and hyperthermia differ21. Reid et al. (2009) agree; they explain that fever is an endogenous chemical process in response to an immune challenge, whereas hyperthermia is an increase of temperature due to an exogenous source15. It would
Febrile Seizures and Paracetamol

It is commonly believed that fever leads to FS. It would therefore seem logical that preventing or reducing fever would prevent FS. This assumption however does not seem to be correct. Rosenbloom et al. (2013) and Fetveit (2008) both found that even after administering an antipyretic such as paracetamol, children may still have a FS. Offringa and Newton (2012) reached the same verdict in their review, and concluded that paracetamol provided no benefit to children when given prophylactically to prevent FS, a view which is further supported by the Steering Committee on Quality Improvement and Management (2008). Additional evidence comes from a large scale, randomized placebo-controlled trial conducted by Strendgall et al. (2009). The authors found that children who received a placebo actually experienced fewer recurrences of FS in comparison with children who received paracetamol. They also noted that paracetamol would not reduce the temperature of a child whose fever resulted in a FS event, however, it would reduce the child's temperature when the fever did not result in a FS event. This has led to speculation that there may be a difference in the mechanism between a fever that causes FS and one that does not.

Discussion

Fever is beneficial to the body unless the temperature rises to dangerous levels. Dangerous fevers usually occur from a more serious underlying illness that requires medical intervention. Therefore, prehospital paracetamol administration would seem warranted in the setting of a dangerous fever. However in the absence of dangerous fever, paracetamol does not appear to be of any benefit to febrile children. Paracetamol decreases the beneficial actions of fever and decreases the effectiveness of the immune system. Furthermore, paracetamol has not been found to reduce fever in children that go on to have a FS, nor does it prevent these children from having a FS. FS are usually benign with minimal risk of long-term disabilities, which further reinforces the view that paracetamol should not be administered prophylactically for seizure prevention.

Parents often administer paracetamol to ill children. Some commonly cited reasons are: to decrease the discomfort of the child during illness; to help a restless child sleep at night; and to help parents cope with an unwell child during busy daily life. Whilst reducing suffering of children and making life easier for parents would seem beneficial, the authors believe this use of paracetamol unnecessary. Considering that children are often given incorrect doses of paracetamol, and that the drug can produce severe adverse effects, the dubious benefits appear to be heavily outweighed by the risks.

Medical practitioners' common misunderstanding of fever reinforces parental fever phobia. Medical practitioners need to better understand the key physiological elements of fever and FS: that fever is beneficial in most circumstances; that FS are usually benign; and that paracetamol administration will not prevent FS. Through education, medical practitioners could then reduce parents' fever phobia. Therefore, educating medical professionals may be the key to reducing the unnecessary and excessive use of paracetamol, and may aid in decreasing the incidence of adverse effects.

Paracetamol overdose can cause permanent liver and kidney damage, and even at therapeutic doses has been linked to respiratory problems in adults and children. Of particular concern is the strong association between the frequent use of paracetamol in young children and asthma. Linking all of these medical issues together is the depletion of glutathione stores in the body. Further research should be conducted to better understand this association and the exact mechanisms involved.

Conclusion

Mild to moderate fever is beneficial, aiding the immune system in its fight against infection. FS are usually benign, rarely cause any long-term disabilities, do not significantly increase the risk of epilepsy later in life, and do not increase mortality.
When administered at doses higher than the therapeutic recommendations, paracetamol can cause damage to the liver and kidneys. At therapeutic levels it reduces the effectiveness of the immune system and has also been strongly associated with asthma symptoms in both adults and children. Evidence does not support the hypothesis that paracetamol administration to febrile children will prevent FS. The questionable benefits of administering paracetamol to febrile children seem to be outweighed the risks. Due to the potentially severe adverse effects, the authors believe paracetamol should not be used prophylactically in an attempt to prevent FS, and should be withheld unless fever reaches dangerous levels.

References

The last few months have been busy with all our CPD events being booked out. We have been busy planning for the next 12 months of CPD’s and PAIC 2015 being in Adelaide.

New Committee Members.
Claire Collhole has joined the committee as the new treasurer Georgia Morris and Chris Wong have now joined the committee to help in the roles of membership secretary and multimedia. We welcome the new committee members with new ideas and energy to help move Paramedics Australasia SA forward into the future.

If you are interested in coming to a committee meeting or helping out at a CPD, please contact Wayne Stoddard – wayne.stoddard@paramedics.org.au.

Rod Kershaw Scholarship
Co-sponsored by Paramedics Australasia (SA) and SA Ambulance Service, this paramedic care scholarship provides the opportunity, through the provision of financial support, to research a process, system, or equipment currently being used in another organisation anywhere in the world for the ultimate benefit of the paramedic profession and SA Ambulance Service.

Check the website for more information at www.paramedics.org/kershaw.

Flinders University O week
The committee members have been busy helping the Flinders University Student Paramedic Association (FUSPA) in meeting the successful students who will be beginning their study in the Paramedic Degree this year. It was great to be involved and watch the 2nd and 3rd Year Paramedic students give their time and experiences to the 1st year students. We look forward to working closely with the FUSPA committee and watching our future members and paramedics grow.

CPD Activity and upcoming events
In November 2014 we held the illicit drugs workshop and in January 2015 the community paramedicine workshop. Both of these CPD events were booked out and provided some insightful information and different ways to look at the future of paramedicine.

On 4 March 2015 the Chapter held ‘A forum on palliative care & end of life decisions in the emergency and pre-hospital setting’. The evening was presented by Dr. Christine Drummond – Senior Palliative Care Consultant, Lyell McEwin Hospital; Andrew Noble – Extended Care Paramedic, SA Ambulance Service; Merridy Bayliss – Organ Donor Co-ordinator, DonateLife SA; and Reverend Jeff May – Ecumenical Coordinating Chaplain, Lyell McEwin Hospital.

On Friday 27th March 2015 – PA-SA will present ‘Paramedico’ around the world by ambulance, which is a documentary about four paramedics in four very different parts of the world. Unmasking the heroes to show us who they really are. Benjamin Gilmore will be present to talk about making the movie.

Future CPD activities will be promoted on the PA website at www.paramedics.org and also on our facebook and twitter feeds. If you have any suggestions for future CPD’s please email sa.cpd@paramedics.org.au

NEW ZEALAND
Auckland to host PAIC 2016!
In very exciting news we can confirm that the PA International Conference (PAIC) 2016 will be held in the beautiful and vibrant city of Auckland, New Zealand. The PA New Zealand Chapter (PANZ) has responded to an invitation from the PA Board to host our prestigious international conference in the harbour city. PA Board member Bronwyn Tunnage and newly appointed PANZ Chair Sean Thompson will work closely with a local conference committee lead by committee members, Sharon Duthie and Bridget Dicker. Stay tuned for confirmation of date and venue!

Annual Chapter Meeting
The 4th Annual Chapter Meeting of Paramedics Australasia New Zealand (PANZ) was held on 27 January at Auckland University of Technology (AUT) with 20 members and guests from all over New Zealand attending.

All positions were declared vacant including long term Chair Sharon Duthie who has stood down after being the driving force in establishing the PA Chapter in New Zealand. The incoming Chair Sean Thompson paid tribute to Sharon’s work and efforts in establishing PA’s newest Chapter and Sharon gave an overview of the achievements of the Chapter in her Chairperson’s report.

The New PANZ Committee:
NAME ROLE
Sean Thompson Chair
Dr Bridget Dicker Secretary
John Hammond Treasurer
Bronwyn Tunnage PA Board Member
Haydn Drake Social Media & Communications
Hugo Goodson Membership Secretary
Rachael Wallen SPA Liaison
Sharon Duthie Committee
Howard Willis Committee
Sarah Gordon Committee

The new Chair Sean Thompson then led a strategic planning session for the new PANZ Committee.
National Registration

In addition, a major priority is representation of PANZ to government and other stakeholders in relation to national registration. To date, a great deal of work has been done in communicating the need for national registration to government and opposition health leaders with Sean Thompson and Bronwyn Tunnage attending a round of meetings in February 2015.

QUEENSLAND

Student Scientific Grants Awarded

In conjunction with the KJ McPherson Education and Research Foundation, PA Queensland provides $2000 for the Student Scientific Grants Section of the awards. These awards were presented at the Annual Patron’s Day Grants ceremony held in November 2014 in Brisbane.

PA would like to congratulate the following students who received awards:

Best Poster Prize – Rachel Kluck
For Point-of-Care Troponin Testing for non-STEMI: Is it feasible in the prehospital setting?

Runner-up Best Poster Prize – Cheniel Steinscherer
For Point-of-Care Troponin Testing for non-STEMI: Is it feasible in the prehospital setting?

Best Paper Prize – Cameron Leman
For Life Threatening Australian Marine Stingers: A Systematic Review of Prehospital Treatment Options

Runner-up Best Paper Prize – Matilda Phillips
For Examining the efficacy of adrenaline in out-of-hospital cardiac arrest.

WESTERN AUSTRALIA

PA in Western Australia continues to provide regular top quality education evenings and we are very pleased to see such a large number of people attending these.

February’s event saw around 90 people attend a very informative session looking at Human Error and Acquired Brain Injuries – with Dr Andrew Piercy, a trauma registrar at the Royal Perth Hospital discussing human factors that can result in human error.

This is highly relevant to a clinician’s clinical decision making and patient care both out-of-hospital and in-hospital. There were also presentations from people at the acquired brain injury unit.

One of these speakers was Matt Cook (pictured with PA’s Event Coordinator, Nathan Haynes). Matt is a patient with a severe brain stem injury post drink driving. He can only blink and slightly move his head and made his presentation through computer technology. It was a very moving experience for all in attendance.

PA Executive Officer Robyn Smith attended both the ACM, discussions on PAIC 2016 and the Strategic Planning Session (pictures above).

“There is a great energy and motivation amongst the paramedics in New Zealand to grow their PA Chapter by adding value to member benefits particularly in CPD” Robyn said.

The Strategic plan identified ways to promote PANZ and its profile in New Zealand paramedicine to support a major membership drive.

PA congratulates the following people for their dedication and commitment to paramedicine and received the Ambulance Service Medal to recognise this in the Australia Day Honours for 2015.

NEW SOUTH WALES

Mr Brian PARSELL

Mr Parsell has provided 24 years of dedicated service to NSW Ambulance, and to the wider NSW community. For many years he has been a key figure in the development and training of operational paramedics in pre-hospital clinical practice, and has been an influential leader, a well-respected role model, and mentor for many paramedics.

He has provided recommendations which have resulted in significant systematic improvements in the delivery of care to patients, including the introduction of specific pharmaceuticals. He is an experienced Intensive Care Paramedic who has frequently been called upon to present on topics such as emergency management preparedness and response, pre-hospital clinical management and the delivery of excellence in care to a wide range of health providers in Western Sydney.

Mr Phillip PROUST

During his 34 year distinguished and broad career, Mr Proust's dedication has made an outstanding contribution to NSW Ambulance in both operational and educational realms. His passion has focussed on the education, training and mentoring of paramedics of all clinical levels and in 2008 he qualified as an Intensive Care Paramedic. He was one of the first clinical training officers appointed in NSW Ambulance and his skills have greatly influenced the development of this emerging role, in particular, his ability to identify the areas of clinical and technical practice and innovations necessary to enhance the quality and safety of paramedic practice is most noteworthy.

In his capacity as an educator he has played a pivotal role in the state-wide training of paramedics on the Cardiac Reperfusion Strategy. Since 2006 Mr Proust has been involved in the development of numerous e-learning packages enabling paramedics to participate in workplace professional development activities.

VICTORIA

Professor Stephen BERNARD

In a career with Ambulance Victoria spanning more than 20 years, Professor Bernard has been pivotal in driving a quality, evidence-based approach to patient care in his role as a Medical Advisor with Ambulance Victoria.

Amongst other notable accomplishments, Professor Bernard has been the chief investigator, or co-investigator, of several studies conducted in partnership with ambulance and medical colleagues that are of international significance. These include the Victorian RSI study, the AVOID study, which measured the benefit or detriment of oxygen therapy to heart attack victims, the RICH and RINSE studies, which measured the effect of therapeutic cooling on outcomes for patients who have suffered cardiac arrest, the POLAR study, which measured the effect of cooling on patients who have suffered severe traumatic brain injury, and the CHEER study, which investigated the use of a mechanical CPR device to transport patients safely to hospital, place them on heart-lung bypass, and provide definitive in-hospital care to restore the heartbeat.

His strong academic and research credentials, coupled with his collaborative approach, most notably with his specialist colleagues in Emergency Medicine, Intensive Care and Coronary Care, have been crucial in providing robust, measurable changes to the pre-hospital care systems of Victoria, which has led to significant improvement in patient outcomes.

Mr Ralph CASEY

In a career spanning 25 years Mr Casey has been instrumental in the delivery of improved clinical care through the provision of technical and communications support to Ambulance Victoria. As a Field Services Team leader he has provided expert advice, innovative change, and operational support to projects as varied as aircraft communications, motorcycle automatic vehicle location technology and communications networks and IT infrastructure to major events.

Of particular note was his expert technical advice and direct support in the Ambulance Victoria project to improve the interface between ambulance and specialist inpatient care centres for heart attack victims.

Further Mr Casey took a lead role in the design and delivery of a new Command and Control vehicle in the lead up to the 2006 Commonwealth Games.

In addition to the provision of standard radio capability, his awareness that data streams would be fundamental to ongoing network development was unique, and was subsequently adopted and emulated by all other emergency services in their Command and Control platforms in Victoria. This delivered a significant degree of interoperability between Emergency Services, which is crucial to an efficient all agencies response to major disasters.

Mr Justin DUNLOP

With almost 20 years service with Ambulance Victoria as a Paramedic, Team Manager and now as Manager, Emergency Management, Mr Dunlop has been an integral part of many key activities, particularly since becoming involved with the Emergency Management Unit (EMU) from its inception in 2004. Mr Dunlop was a key planner for the Commonwealth Games in 2006 and has been instrumental in the development of the Ambulance Victoria emergency response plans and the State Health Emergency Response Plan (SHERP). He has also demonstrated his superior technical ability in the development and implementation of Ambulance Victoria’s Emergency Management System (Noggin) and the Ambulance Emergency Operations Centre (AEOC).

Further, Mr Dunlop’s role in a number of major incidents in Victoria, such as the 2009 bushfires, and, more recently, during the 2014 bushfires and heatwaves, has been particularly acknowledged and commended.
Of particular note has been Mr Dunlop’s role as a key driver and developer of the Prehospital Emergency Simulation Training Project; creating and delivering online virtual simulation scenarios, allowing first responders to learn and train in triage for disaster situations.

Mass casualty triage is a low frequency, high consequence activity, where good training can make the difference in saving many lives. This project is playing a vital role in increasing preparedness and community resilience across Victoria.

Mr Andrew McDonnell

Mr McDonell is a Clinical Support Officer for the Loddon District and commenced his career in paramedicine in 1989. With a passion for education, Mr McDonell worked tirelessly to establish the Paramedic Sciences Department at Victoria University, with the first intake of students into the Bachelor of Health Sciences (Paramedic) occurring in 1999. This was the only course of its kind in Victoria at the time, and only the second in Australia.

Following the success of this course, Mr McDonell went on to establish the first post graduate Intensive Care course for paramedics which provided Victorian ambulance services with their first intensive care paramedic education alternative to the contracted MICA course.

Further, Mr McDonell was the lead in a number of processes, procedures and programs that are still used today, the most notable being the Clinical Induction, Bridging or Remedial Program (CiBoR). This program is an injection of contemporary assessment and teaching methods that support new and current operational employees to identify gaps in their clinical knowledge, competency and/or clinical skills, and give their educators the foundation to provide the necessary instruction and education. The program uses adult learning principles within a cooperative environment to support paramedics to bridge any identified gaps.

Mr Ian Rogers

Mr Rogers joined the Maryborough Ambulance Auxiliary in 1973 after having served since 1958 as a casual Ambulance Officer. As a committed auxiliary member for more than 40 years, and as a volunteer, he has significantly contributed to Ambulance Victoria’s operations, including an active role in the establishment of two ambulance stations in Maryborough. He has used his invaluable skills and experience to contribute to the planning of new local stations and in liaising with community groups to raise funds to purchase equipment as the ambulance stations expanded.

During Mr Rogers’s tenure as an auxiliary member, Maryborough ambulance station has grown from being a one person station to accommodating a staff of 15 paramedics operating on a 24 hour basis.

Mr Rogers has also been a long serving member of St John Ambulance, having commenced as a Private in 1961, and promoted through the ranks to Corps Superintendent and Senior First Aid Instructor in 1997. He has fostered and encouraged many people through his First Aid instruction, including Scouts and Guides, and has inspired others to undertake further studies and forge careers in the medical field.

Mr Michael Stephenson

Mr Stephenson commenced his career with Ambulance Victoria in mid-1996, going on to become a MICA Paramedic, Clinical Instructor and Team and Group Manager.

In 2012 he was appointed to the position of Regional Manager, Gippsland. Throughout his career Mr Stephenson has continually strived to improve patient outcomes; challenging current practises and investigating and interrogating new ways of treatment. This was particularly evident in the area of pre-hospital treatment of cardiac arrest. He has a passion and drive for research and has influenced key changes in clinical practice that have had a direct impact on improving clinical outcomes. Further, he was instrumental in formalising new clinical guidelines for Ambulance Victoria paramedics for the management of cardiac arrest, and was a significant contributor to the education program and teaching of the new concepts.

Mr Stephenson has also been involved in developing guidelines for advancing pre-hospital care of myocardial infarction, traumatic brain injury, emphysema, stroke, and seizures.

QUEENSLAND

Mr Craig Jackson

Officer Jackson commenced with the former Queensland Ambulance Transport Brigade, now the Queensland Ambulance Service (QAS), in August 1979 as a full time Ambulance Officer. He provided diligent service to the Brisbane, Bribie Island and Caboolture communities for over 34 years as an advanced care paramedic. His commitment and dedication to the community is reflected in the respect and high regard he has received from both the general public and from his QAS peers. Officer Jackson is the epitome of a professional Ambulance Officer.

Mr Wayne Jackson

Information withheld at request of the recipient.

WESTERN AUSTRALIA

Ms Deborah Jackson

Ms Jackson joined St John Ambulance as the Human Resources Manager in 2003 and was promoted to the position of Human Resources Director in 2006. As the Human Resources Director she has responsibility for HR & IR, Staff Planning and Deployment, Occupational Safety and Health, Volunteer Member Services, Workforce Planning and Education and Accreditation. As a key member of the Executive Team Ms Jackson has played a vital role in shaping the direction and performance of the organisation through its staff and volunteers.

She has completely redeveloped the way in which the community can use volunteering for St John as a career path towards becoming a paramedic through instigating practices that see volunteers walked through the recruitment process with full recognition being given to their volunteer contribution. These processes have had a profound impact on the organisation’s ability to attract volunteers.

She has also guided the organisation through the necessary recruitment processes that saw the staff numbers double in six years including establishing paramedic recruitment channels within Western Australia, and around the rest of the country, as well as specific recruitment programs in South Africa and the United Kingdom. Ms Jackson has provided distinguished service, displayed innovation and leadership, and has made an outstanding contribution in the areas of Human Resources and volunteering for St John Ambulance in Western Australia.

Mr Robert James

Mr James is a volunteer with the St John Ambulance Sub Centre at Lancelin, joining in 1996, and he has continuously served the local community in a variety of roles. The impact he has had in terms of ensuring the availability of a high quality volunteer ambulance service for the community of Lancelin cannot be overstated. In 1999 he was appointed to the position of Sub Centre Chairman, and in 2001 he became a volunteer ambulance officer trainer.

Mr James works tirelessly to ensure the Lancelin Sub Centre operates to the highest standards in terms of availability and quality of service.
In 2013/14 he attended 65 ambulance cases, delivered 25 training sessions, mentored 2 new trainers, organised a full Local Emergency Management Committee exercise, introduced, trained and supported the introduction of the new ambulance data system and electronic patient recording system, and campaigned for the purchase of an emergency response trailer.

Currently the Sub Centre has 61 volunteer ambulance officers and is amongst the strongest in the state. Mr James maintains the strength of the volunteer involvement by ensuring the Centre has a strong social side as well as the functional side. He also takes responsibility for the satellite sub branches at Woodridge, Ledge Point and Ocean Farm travelling extensively to deliver training. In addition to all of this he extends his influence across the state by assisting the St John College of Pre-Hospital Care in the delivery of training. He is a role model for others with excellent mentoring and motivational skills.

Mr James has provided long and distinguished service to St John Ambulance in Western Australia.

Mr Graham JONES

Mr Jones commenced his pre-employment ambulance training in 2002 and joined St John Ambulance as a student ambulance officer in 2003. He is currently the Station Manager of the ambulance centre based at Sir Charles Gairdner hospital in Perth. Prior to the commencement of his career with St John, he was involved with surf lifesaving and had completed various first aid and resuscitation training programs. His previous employment included being a lifeguard with the City of Stirling and an event safety officer and instructor with the Royal Life Saving Society.

From the start of his involvement with St John Ambulance it was apparent that he has a special quality in terms of his desire to help people and continually improve the safety and high standard of the paramedic profession. His genuine care and concern for his patients is reflected in the extraordinary number of commendations he has received from the public over the course of his career. In 2008 he was promoted to the position of Station Manager which was a reflection of the mature and professional way in which he conducted himself as a paramedic and more importantly the positive influence he has on both colleagues and the community.

One of Mr Jones’ most significant contributions has been in the area of occupational health and safety. Not only has he put in countless hours over and above his paid service as a paramedic but he has approached the challenges in this area in a positive way. He has a unique leadership ability to take on issues while at the same time taking people with him to achieve positive change. He is currently participating in the planning and configuration of a new ambulance centre at Nedlands, which further demonstrates the degree to which he will go over and above what might normally be expected to ensure the safety and quality of the work environment for his colleagues, and the quality of ambulance services delivered to the Western Australian community.

Mr Jones is a credit to the paramedic profession.

SOUTH AUSTRALIA

Mr Bartlett is a passionate paramedic of the highest integrity who has dedicated his career to the clinical development of staff and service delivery. His leadership has led many to share his passion to strive for best practice and he has been a major driver of clinical development in the South Australian Ambulance Service.

Mr Bartlett is involved in clinical development and has championed evidence-based research, business case development, clinical practice guidelines and procedures, training development and the carrying out of clinical changes above the demands of his role.

Additionally, he has been a member of various committees including Paramedics Australasia, the Paramedic Clinical Advisory Committee, and the Australian Resuscitation Committee.

Mr Paul CLARK

Mr Clark has been employed by the South Australian Ambulance Service (SAAS) for 33 years. During this time he has excelled in many areas of the organisation showing a strong commitment to the ambulance profession. He has shown exceptional leadership, has an enthusiastic approach to pre hospital care, and a drive for personal excellence. Mr Clark has consistently been involved in many programs throughout his career that have been important to ambulance service development in South Australia. He is a founding member of the Special Operations Team (SOT) and was one of the first full-time lecturers at the newly formed Ambulance Service Training College in 1990 to deliver the new nationally recognised Diploma of Applied Science.

Mr Clark was also one of the first paramedics in the state to undergo the Intensive Care Paramedic program for South Australia and was instrumental in helping in the development of applying the knowledge and skills of a high quality Intensive Care Paramedic to the SAAS.

He has represented the SAAS on several committees during his career including The Tafe Board of Studies, Metropolitan/Regional Response Committees, and the Institute of Ambulance Officer Educational Committees. Mr Clark was also a highly involved volunteer member with St John Ambulance for many years and served as an educator and mentor in the training ambulance officers to be confident and competent care providers.

TASMANIA

Mrs Janny O’KEEFE

Mrs O’Keefe began her association with Ambulance Tasmania in 1970 as a Volunteer Control Room Operator responsible for despatching ambulances. During the period 1970 to 1975 she was a member of the Northern Districts Volunteer Association, serving in number of roles.

In 1983 she was appointed to the Northern Districts Ambulance Board as an Administrative Assistant and she subsequently undertook tertiary studies in accounting and in 2000 she took up a fulltime role teaching accountancy. While teaching accountancy Mrs O’Keefe continued to participate in special project work for Ambulance Tasmania developing budgets and providing financial advice and she was the honorary auditor for the Volunteer Ambulance Officers Association for some years. In 2004 she was appointed as Manager, Strategic Business Development with Ambulance Tasmania.

Since gaining that position Mrs O’Keefe has dedicated herself to the role. She has introduced new financial management systems, refined existing systems, and has provided high level financial analysis. Her dedication and ability is reflected in her appointment to the Emergency Management Working Group as the Tasmanian Emergency Services Representative.

Mrs O’Keefe’s expertise and dedication has been a significant factor in Ambulance Tasmania’s ability to manage challenging budgetary issues.
FernoSim Challenge 2014
Watching the evening Fernosim challenges on Friday was inspiring and unexpectedly humorous. The opportunity to observe the differences in ways various states and countries work was fascinating, and when compared with the student Fernosim challenges, it made me realise how far all of us students have to go before being able to work as fully-fledged, competent paramedics that won’t crack under the pressure of strange and difficult situations. I think seeing this gave all those observing and competing the motivation to push and improve on our skills and automaticity more and more every day.

SPA Conference
The selection of lectures on Saturday covered everything that I wanted to learn about, that I didn’t realise I had been missing out on! My personal favourite, Marc Colbeck’s lecture on ‘Expecting the Unexpected’!
Discussing concepts of stress, mindfulness and emotional balances, this lecture filled gaps in an important topic that was briefly discussed in my first year of the paramedic degree at Flinders University, however back then I had listened with glazed eyes as I couldn’t see the use of the information that was being delivered. Now, after having the information delivered by a passionate lecturer with first hand experience I believe this may be one of the most important things we will ever learn in our degree, after our DRSABCDE of course!
Picking a favourite was far from easy though, each and every lecturer was passionate about the topic they were presenting beyond belief which sparked an added investment of interest from everyone in the room. This created a learning environment like nothing I’ve ever experienced at university but was most beneficial to my future practice as a paramedic!
The lectures presenting first-hand information from researchers on up-and-coming clinical practices also made it difficult to pick a winner, as it was extremely refreshing to receive this information without slaving over piles of evidence-based journal articles.

Post-Conference
My favourite part of the weekend though – the post conference networking drinks. How could the opportunity to discuss your own ambitions for your future career and enjoy a good giggle in a social setting with mentors and idols alike not be a completely rewarding experience, especially with offers to complete placements that you didn’t know were possible in different states and countries reeling in?
Having all this bundled up nicely with the relaxed atmosphere and weather of the Gold Coast, learning didn’t feel like learning and I felt refreshed, inspired and motivated enough to return home and push through the piles of study that we all see piling up during that final leg of the last year of our degrees!
The SPA conference is something I would recommend to anyone wishing to have a little fun while improving their clinical knowledge above and beyond what can be achieved in a university environment, I only wish I got around to attending more than once!
Change Day in both Australia and New Zealand is upon us, but there is still opportunity to show your support and pledge to change. Change Day provides an opportunity to all those who work in healthcare, from health district CEOs, to ward nurses, paramedics, wardsmen and cleaners to reflect on their own practice, attitudes and workplace policy and make a pledge to change something they wish to do better or differently in the future. Change Day Australia was pioneered by Mary Freer, a habitual change-maker for the first time in 2014. The concept was adopted from the NHS change day in the UK where they received over 180,000 pledges for change. After a promising start in 2014, the Change Day committee crowd-funded to raise over $20,000 to create an even more impactful event in 2015. Paramedics are invited to join what is now an international event to make a pledge that will help improve the quality of healthcare they provide, the patient journey or to improve their workplace culture.

Examples of pledges that were made by both student and qualified paramedics in 2014 are

- “…to introduce myself by name to the patient and their family for each and every case.”
- “…to dismiss all preconceptions about cases and any patients involved based on the information I receive prior to or en route to each case.”
- “…to check in with my colleagues continuously and ask “R u Ok” and lend an ear to listen whenever I can.”
- “…to turn paramedicine on its head! I pledge to drive an innovative community paramedicine pilot in rural South Australia.”
- “…to learn more so that I can better myself so that I can better the outcomes for anyone in my care.”
- “…to ensure my patient interaction is fair and equal to all I have the privilege of dealing with, no matter their race, sex, socioeconomic status, religious beliefs, medical history, disability, age or any other personal characteristic.
- “…to not be intimidated by senior colleagues and to aggressively advocate for effective pain relief in my patients.”
- “…to improve paramedic access to a utilisation of FOAMed, I will be a master of my technical skills and seek to fill in any gaps in my knowledge.”
- “…to improve communication in the prehospital team as well as in transfer to definitive care. Most importantly I will not become a cynical jaded person.”

We, as clinicians struggle with motivation, burn-out, chronic lethargy from ongoing shift work and long hours as well as discontent with industrial issues and time away from our family.

It can become easier to gripe and wait for the circumstances to change for us. Change Day is the chance for you to join the thousands of others and pledge to change what you see can become better. One or two pledges may create a ripple, but tens of thousands will create a wave of positive change. No pledge is too big or small.

Paramedicine is always developing and changing. There are endless ways that you can contribute to more positive outcomes for both patients and colleagues.

You can visit the Change Day Australia, youtube channel and see how four people’s pledges in 2014 have instilled change in their workplace.

https://www.youtube.com/watch?v=9XmEd7X5kFs

What can you better? What can you do differently? How can you make it better for others?

Go to www.changeday.com.au or www.changeday.kiwi

Make a pledge. Then share it with your colleagues and us on facebook or twitter.

“Be the change you want to see in the world” – Ghandi

For more information or to share your change day event you may contact me directly at jessica.morton@studentparamedic.org.au or info@changeday.com.au
PAIC2014: Caring for Older People who have Fallen

Lachlan Ophof

The decision making process of a Paramedic's ability to adequately assess and refer or transport elderly patients post a fall can lead to detrimental patient outcomes. Older fallers make up to 6-8% of Australian annual pre-hospital workload; while up to 40% of these sub-acute presentations are not transported or referred onto allied health.

Interestingly, common themes implicating Paramedics to satisfactorily manage this cohort are shadowed across ambulance services throughout the developed world; these findings were presented across two seminar sessions held throughout the Paramedics Australasia International Conference (PAIC) in the Gold Coast on the 19th and 20th of September 2014.

Two studies conducted by Paul Simpson, an employee of the NSW Ambulance Service and University of Western Sydney, were presented: “Non-transport of older fallers following Paramedic attendance is associated with increased mortality: A linked data analysis” and “Decision making by Paramedics when caring for older people who have fallen: A qualitative grounded theory study”. The two sessions aimed to highlight Paramedic’s thought processes tainting their ‘better judgement’ to treat the elderly cohort and to discuss the question ‘can Paramedics become culturally reset?’.

Statistical risks of adverse patient outcomes:

Statistics from a linked data analysis revealed that 60% of those patients transported to an emergency department required hospital admission thus, exposing the complexity and actual acuity of fall presentations.

There is a 37% greater risk of ambulance re-attendance in those fall patients not transported; not only increasing workload but also increasing the likelihood of adverse patient outcomes from subsequent falls.

The risk of mortality to fall patients not transported is 2.7% greater for five days post their fall and only has a marginal decline (1.12%) post the five-day mark.

Identified barriers and themes when treating elderly falls patients:

• Falls patients are not perceived as ‘legitimate’ or ‘sexy’ or ‘good’ Paramedic work, it is the role of community health workers.

• Attending to falls is degrading as Paramedics are highly trained and educated clinicians that can save lives, yet here we are lifting people up off the floor.

• Paramedics aren’t given the education and training to make safe clinical decisions in the low-acute community setting. As Paramedics did not receive structured, curriculum based training for falls it was perceived to not be an important aspect of their day-to-day work.

• Paramedics only revise and practice the ‘sexy’ clinical guidelines/protocols/algorithm.

• Hospital ‘ramping’ influences Paramedics to leave these patients at home despite contradicting clinical cues.

• Establishing referral pathways and a suitable ‘safety plan’ for the patient when left at home is time intensive, implicating Paramedics availability to respond to ‘true’ emergencies. This concept is reinforced by communication centres requesting crews to clear for alternate cases, and is to the patient’s detriment.

• Paramedics lack confidence to enforce appropriate care pathways out of fear that their perspective employer will not ‘back them’ if they are wrong.

• There are inadequate referral pathways to assist Paramedics outside business hours.

• Contradicting the trend is the Extended Care Paramedic’s (ECP) perception that fall cases are considered legitimate work and are clinically challenging.

Take home message for pre-hospital clinicians:

• Fall cases are prominent within the ambulance setting and can present with clinical manifestations that need to be carefully examined.

• Identify and challenge what influences your decision making; be it professional attributes, knowledge of health care systems, perception of roles, behavioural influences, emotions/ cognition or self-confidence in your own abilities.

• Become familiar with your organisations falls protocol/ guideline/ algorithm (the following is from SA Ambulance Service).

Current literature on pre-hospital falls in the elderly:

There is adequate literature published in relation to the elderly and falls to identify both national and international trends yet further studies are needed to identify and evaluate the efficacy of alternate care pathways in those that aren’t transported.

A systematic review of the data available suggests that non-transport rates are dependent upon the training level of the attending Paramedics, that non-transported individuals often require subsequent ambulance visits and that those who suffer from falls may benefit from an interdisciplinary referral, assessment and intervention.
EMSA Conference 2014: Decompression Illness

Decompression illness is the umbrella term used when talking about either decompression sickness or cerebral arterial gas embolism. Decompression illness arises in conditions associated with deep sea diving and the likelihood of contracting these illnesses is linked directly with the depth of a dive, duration of dive and the time taken to “off gas” during a diver’s ascent to the surface.

Decompression Sickness (the Bends)

For each 10m a diver descends their body will be put under an extra atmosphere of pressure (i.e. 10m depth = 2 x atmospheric pressure, 40m depth = 5 x atmospheric pressure). As atmospheric pressure increases the partial pressure (Pp) of nitrogen and oxygen we breathe will also increase and hence will more readily diffuse into our blood stream and tissues.

Unlike oxygen, the nitrogen we breathe is inert and not used for metabolism/bodily function and will thus accumulate in the blood and tissues. Largely due to the poor solubility of nitrogen, often as it accumulates it will start to form bubbles in the blood and tissues which if left can cause symptoms such as malaise, generalised aches and pains (especially in joints), subcutaneous emphysema (marbling) nausea vomiting, abdominal cramps and chest pain.

The symptoms will vary depending on the amount of nitrogen bubble accumulation present and the location of where the bubbles occur. Decompression sickness has an unpredictable nature and can take between 30 minutes to 24 hours to present with the development of inflammatory mediators partially responsible for the delay in symptom development.

Cerebral Arterial Gas Embolism (CAGE)

CAGE is characterised by the presentation of neurological symptoms prompted by a nitrogen bubble that lodges in the brain and subsequently impedes perfusion. A patient may present with stroke like symptoms (i.e. visual or speech disturbance, facial droop, decrease or complete loss of limb strength) or any of the following neurological symptoms headache, confusion, memory loss, ataxia, vertigo, nystagmus, tinnitus, hearing impairment, paresthesia, paralysis, unconsciousness.

It is difficult for the nitrogen bubbles to form in the arterial system relative to the venous system as the more muscular layered walls of arterial vessels do not easily allow for gas diffusion; however it is possible.

More commonly however, an arterial gas embolism will form in the venous system and by-pass the lungs (where it may have likely been breathed out) into the arterial system via a patent foramen ovale. Up to 25% of the general population have a patent foramen ovale, hence CAGE is a serious acute illness that can potentially affect many divers.

Prevention and Treatment

The number one prevention against developing either decompression sickness or cerebral arterial gas embolism is “off gasing”. This term is used to describe the requirement of breathing out the excess nitrogen in the blood stream and tissues and is done so by ascending slowly and making stops during one’s ascent to the surface. This allows the nitrogen to re-enter the blood stream from the tissue and be breathed out via the lungs.

The deeper the dive, the larger increase in partial pressure of nitrogen and hence increased level of nitrogen bubble formation. Therefore, the further down a diver goes, the longer it will take him/her to off gas and ascend to the surface safely.

Even if a diver follows protocol and ascends slowly, making the required stops to off gas as they ascend, they still may very well develop decompression illness, as is the fickle nature of the disease. If a person presents with a decompression illness a hyperbaric chamber is required for treatment.

Within South Australia, the Royal Adelaide Hospital is the only facility equipped with a hyperbaric unit and all patients will need to be transferred there.

Placing a patient in a hyperbaric chamber will expose them to an increase in atmospheric pressure and this increase will essentially decrease the size of the nitrogen bubbles so they can more easily re-enter the venous blood stream and be breathed out via the lungs.

The increased atmospheric pressure of the hyperbaric chamber will also facilitate increased oxygen delivery to the tissues where it can be used to help cellular metabolism and the pathophysiological process to repair the damaged tissues.

**Subcutaneous emphysema**

**Significant nitrogen bubble formation**

**Quick and Easy Dive Table**

Simple Dive Table used as a guide for “off gasing”
It is difficult for pre-hospital health care practitioners to challenge their focus on actively treating a patient in their end stages of life and shift towards maintaining emphasis on the individual’s wishes to have good palliative care and be a potential organ and tissue donor. There has been an identified ambiguity by practitioners and the general public into what constitutes a ‘good death’ within the emergent setting and what legalities and criteria are involved for the deceased to be an organ donor; this finding was highlighted by two separate seminars held throughout the EMSA conference in Adelaide on the 22nd and 23rd of August 2014.

The session “To Live or Let Give - End of Life Care in the Emergency Setting” hosted by Emily Pumpa and Merridy Baylis discussed concerns of a decline in Australians donating organs and tissues. Statistics gathered from 2013 stated that the average donation rate within Australia is 17 donors per million population. In South Australia we have a slightly higher average of 20.3 donors per million population. With that in mind the aim of the session was to empower practitioners to be able to make informed referrals for potential organ donors and manage the patient appropriately to optimise perfusion until organs can be harvested. So what are the facts about organ and tissue donation?

Demographics: An organ donor is more likely to be a 55 to 64 year old male who is a blue-collar worker with an average BMI. This group is most likely to be a victim of a cerebral vascular accident or a significant trauma.

Barriers to donating: accessing a suitable donor within an acceptable timeframe from death, limited resources (in particular availability of ICU beds) available to manage this patient cohort post death and prior to harvesting organs and ability to keep the deceased perfused whilst managing excessive patient workloads still requiring active treatment. South Australia only has liver, kidney and cornea transplant facilities therefore, all thoracic organs need to go interstate and successful transplantation is implicated by time.

Considerations: There is a lot of controversy around the ethical nature of transferring pre-hospital deceased patients or patients under active CPR purely for organ donation. Due to Australia’s geographical characteristics many potential regional organ donors are never harvested. However, there is a move to incorporate medSTAR into this paradigm so there may be future changes? Education programs are being initiated to target the clinicians who manage large cohorts of potential donors; in particular neurosurgery. Unfortunately there are no plans to date for pre-hospital clinicians to be incorporated into such education programs.

Contradictions for donation: Patients with a history of cancer, HIV and AIDS. Patients above the age of 80 years are ineligible to donate. However, 80+ year olds are still eligible to donate their cornea.

Take home message for pre-hospital clinicians: Remember the acronym “GIVE” (GCS less than 5, intubated, ventilated, end of life care). All patients that fulfil this criteria are potentially eligible organ and tissue donors and if clinically appropriate should be transported for further consideration.

Current literature on organ donation: There is minimal recent literature published in relation to organ donation within the pre-hospital and emergency department realm; only four studies were identified. All four studies were published internationally and therefore lack validity in relation to Australia’s health care system and laws. Similarly there appears to be an international trend of increased demand for organs and a plateauing quantity of donors. It was identified that a lack of available education and the general public’s understanding into what organ donation entails and the processes required to be listed on a national register is the greatest inhibiting factor for an individual to be a potential organ donor. Alike the seminar, these studies also detailed concerns around the ethical nature of transferring pre-hospital deceased patients or patients under active CPR purely for organ donation.

Where to find more information about the donor register: visit online www.humanservices.gov.au/organor donor or www.donatelif e.gov.au alternatively you can email aodr@humanservices.gov.au or call 1800777203.

References
EMSA Conference 2014: Social Media & Medico-Legal Implications

David Worswick, an associate lecturer at the School of Law, Flinders University, gave an interesting presentation on Friday morning focussing on social media and the medico-legal implications surrounding its use, particularly in relation to the emergency setting. The following paragraphs outline key points from his presentation.

Social media is primarily used to disseminate information and acts as a window into your life. The current challenge for all of us is in the management of its use. The issue has become so important that AHPRA (Australian Health Practitioner Regulation Agency) has a specific social media policy governing its members and has identified two key problems; the posting of unauthorised photographs and the practice of advertising and testimonials. Medical defence organisations have also recognised a number of categories of significant risk including potential harm to the patient, to the organisation and to the individual.

Confidentiality concerns are a major consideration. With social media being such an open forum it is relatively easy for people to make links between various sources of information that then readily identify the person(s) or places involved. Images posted often offer clues about the location in which they were taken with many now containing a geotag that can provide GPS coordinates of where the image was taken. Family and friends able to identify an individual may then post comments to social media without the individual’s consent. In the worst cases this may extend to information being readily disseminated before official notice has been provided to the individual’s close family or next of kin. In obtaining consent to photograph an individual or even a body part the question needs to be asked as to whether or not the person is able to think clearly enough to provide true consent – are they able to consider their options properly at that time?

In this age of rapid information it is easy to forget the potential impact of an impulsive comment or single photograph so think first before acting.

In Brief

EMSA Conference 2014: Ambulance Victoria’s First Responder Programs

At the 2014 EMSA Conference, Ambulance Victoria’s Tony Walker, Intensive Care Paramedic and General Manager of Regional Services, presented on the firefighter co-responder program. Ambulance Victoria is a large service, consisting of 280 response locations, both career and volunteer, with 4500 operational staff.

Ambulance Victoria has many first responder programs that aim to reduce the amount of time taken to respond to life threatening emergencies such as their community emergency response teams, ambulance community officers and remote area nurses. Ambulance Victoria also has initiated projects such as the AED registry, public access AED’s and community CPR training, which aim to reduce response times. Ambulance Victoria reviewed their past cardiac arrest data to find that their response time was poor, bystander CPR was only started in 22% of cardiac arrest cases and their patients had poor survival outcomes. These first responder programs have shown to improve all of these factors.

The firefighter co-responder program was started as one of the initiatives to help reduce response times. If a person suffers a cardiac arrest within metropolitan Melbourne, both Ambulance Victoria and the Metropolitan Fire Brigade will be dispatched. The firefighters have undertaken 80 hours of vocationally recognised training to provide basic life support, including CPR and defibrillation. The crews are equipped with an AED, oxygen and a first aid kit. Once the paramedic crews arrive, the fire fighters stay to provide assistance with CPR, airway management, defibrillations, and extrication. Ambulance Victoria provides paramedics to conduct debriefs and case audits for every cardiac arrest case that the fire fighters attend. They also conduct skills maintenance sessions. Peer support is also offered from both an Ambulance Victoria perspective as well as from the Metropolitan Fire Brigade.

Ambulance Victoria has found that these community responder programs have improved their cardiac arrest outcomes. The response time to cardiac arrests has decreased on average by two minutes and bystander CPR has increased to 70%. The time to the first defibrillation has also decreased. Interestingly, it is protocol that all clinicians (irrespective of clinical level or experience) do the first rhythm check and shock in AED mode. After this, the clinicians may choose to switch to manual mode if trained to do so. Of those that suffer a VT/VF cardiac arrest in metropolitan Melbourne, 61% survive until hospital, and of those 46% are discharged. On discharge, 89% of those return to home (68% returning to work), 9% to rehabilitation and only 2% are discharged to nursing homes.

Currently Ambulance Victoria has a pilot project underway with the Country Fire Association. The volunteer fire fighters have undergone the same training and have the same equipment allowing for them to respond to cardiac arrests. This has already been shown to dramatically reduce the response time, as often in the country the ambulance has to come from another town. Future directions for this program include aims to have all fire trucks equipped with an AED and first aid kits with people trained to use them.
MARCH
Trauma, Critical Care & Acute Care Surgery
When: 23-25 March 2015
Where: Las Vegas, US
http://www.trauma-criticalcare.com/?id=1

APRIL
9th Annual Update in Paediatric Emergencies 2015
When: 10-12 April 2015
Where: Noosa, QLD
The 9th Annual Update in Paediatric Emergencies, April 10-12, 2015, is shaping up to be one of our best. A distinguished faculty, a program format that allows ample time for networking and reflective learning, and the idyllic surrounds of Noosa’s most luxurious five star resort combine to make this meeting an essential element of your CPD calendar.

10th International Spark of Life Conference
Frontline to Recovery
When: 16-18 April 2015
Where: Melbourne, VIC

Regional Critical Care Conference
When: 17-18 April 2015
Where: Bendigo, VIC
The two day conference will feature keynote speakers, plenary sessions, practical workshops and a stellar social function at the Capital Theatre, View Street, Bendigo, Victoria.
Sessions include: The journey of the critically ill patient, patient transport, toxins, paediatrics, mechanical ventilation, cardiac care, renal replacement therapy and more.
Some great keynote speakers booked, including:
Professor Ruth Endacott
Dr Marcus Kennedy
Dr Rod Campbell
Professor Leigh Kinsman
Professor Ian Baldwin
Dr Elizabeth Skinner
Dr Andreas Schibler

Trauma Care Conference
When: 18-24 April 2015
Where: Shropshire, UK
http://www.traumacare.org.uk/conference

Trauma Care Conference is now an established part of the UK trauma year. We attract a spectrum of distinguished speakers from all the specialities and professions providing a unique blend of subjects. This unique blend makes Trauma Care Conference not just a doctors’ conference, but rather an opportunity for everyone to learn together.

MAY
Australian and New Zealand Disaster and Emergency Management Conference
When: 4-5 May 2015
Where: Broadbeach, QLD

11th International Conference on Rapid Response Systems
When: 18-19 May 2015
Where: Amsterdam, Netherlands
http://www.metconference2015.com/

19th World Congress for Disaster Emergency Medicine
When: 21-24 May 2015
Where: Cape Town
https://www.eiseverywhere.com/ehome/wcdem15/Home/?eb=127789

JUNE
SMACC Chicago
When: 23-26 June 2015
Where: Chicago, US
http://www.smacc.net.au/

SMACC (Social Media and Critical Care) Gold was a phenomenal success, attracting almost 1300 delegates and doubling in size in only its second year. The decision to take SMACC internationally, to Chicago, is the next step in this exciting experience.
The SMACC Gold conference not only brought together a diverse group of critical care practitioners (Emergency Physicians / Intensivists / Anaesthetists / Rural and Pre-Hospital Specialists / Critical Care Nurses and Paramedics) it united the biggest names in online medical blogs and websites from around the world.
In June 2015 ‘SMACC Chicago’ will be even better. We are expecting over 2500 delegates and in response to your feedback from 2014 there is more:
• Intensive Care and Anaesthetic content for critical care
• A fifth concurrent session to make your choices even harder
• More critical care Paediatrics
• A huge range of pre-conference workshops
• More big name speakers from around the world
• An expanded SMACC Bar and lounge
• Child care facilities on site
• Sonowars reborn
• A huge exhibition hall where lunch and tea breaks are provided FREE to delegates – to enhance the networking opportunities

JULY
Stress Management Summit
Where: Philadelphia, US
http://stressmanagement.global-summit.com/

AUGUST
Pinnacle 2015 EMS Management and Leadership Conference
When: 3-7 August 2015
Where: Jacksonville, US
http://pinnacle-ems.com/

NAEMSE 2015 Symposium
When: 4-9 August 2015
Where: Nashville, US
http://www.naemse.org/symposium

SEPTEMBER
EMS World Expo
When: 15-19 September 2015
Where: Las Vegas, US
http://emsworldexpo.com/

OCTOBER
PA International Conference 2015
When: 2-3 October 2015
Where: Adelaide, SA
www.paic.com.au