



## **PRESENTATION OVERVIEWS**

**Dr Ruth Townsend**

### **Industrial action and “controversial” service policy in the context of professional responsibility under registration.**

Over time, paramedics have advanced their knowledge and skills, and consequently have become regulated as healthcare professionals. Regulation provides enforceable measures to ensure that paramedics are meeting their professional obligations to work in the best interests of patients, and to maintain public trust and confidence in the paramedic profession. However, despite the regulatory recognition of the advancement of paramedic professionalisation, paramedic pay and conditions around Australia have not consistently reflected this change. This session will explore the potential professional, personal, legal and ethical conflicts that can arise when paramedics plan and take industrial action to improve wages and conditions, but that has the intended consequence of disrupting patient care.

**Libby Hanrahan and Luke Frost**

### **Move your leg I need to Wee**

We will discuss the job that Libby Hanrahan and Luke Frost attended on 17 May 2020. An hour before last light they were tasked by Helicopter to a climber fallen at Carnes Wall in Medlow Bath. The climber had fallen 20 metres and was now on a one-metre wide ledge. The patient was 70 metres down from the top of the cliff, with a further 150 metres of rugged rock face below, to the valley floor. The patient was seriously injured with multiple complex fractures. Carnes Wall is an unclimbed route in a remote area of the Blue Mountains in NSW that had recently been ravaged by fires. The next 20 hours, with the assistance of Police Rescue, they worked in extremely difficult conditions to access and treat the injured climber. They spent the night on the side of the cliff before being able to winch extract him and transport him to hospital the next day.

**Sunny Whitfield**

### **The Hijacked Ambulance – Amygdala activation in paramedic care**

Paramedics are used to the emotional and physical challenges that the role commands. But there is an encounter that a paramedic may not be in anyway prepared for. The sickening, emotionally numbing feeling when they realise that they have been dispatched to their own home. The battle between neurons and emotions is a one-sided slip, that once on, a paramedic will have little chance to regain control. What happens when these two worlds collide? How do we respond, cope and recover? I wish I had the answer, but I don't. All I have to offer are my own experiences and observations as a paramedic whose two worlds have collided.

## **Vivienne Tippett**

### **Wicked Ramping**

In planning and policy, a 'wicked problem' is 'a problem that is difficult or impossible to solve because of incomplete, contradictory, and changing requirements that are often difficult to recognize'. COVID-19 has focused our attention again on ambulance ramping and the capacity of our emergency prehospital systems to respond to surge conditions. This presentation describes the best available evidence on health services/ambulance response to these challenges.

## **Lucy Oatley**

### **Don't cut the LVAD wire – an overview**

As cardiac care continues to improve, increasing numbers of patients are being managed with Ventricular Assist Devices (VADs) as a bridge to heart transplant and are highly likely to require paramedic assistance at some point in their care trajectory. VAD patients have specific requirements for transport and treatment that differ significantly from regular ambulance presentations. Even when their reason for ambulance attendance is not related to the VAD, the consideration of the logistical requirements of patients fitted with a VAD remains crucial to safe treatment and transport. This session aims to provide an overview of the physiological differences, key management points, resuscitation decisions and transport considerations for these complex patients.

## **Chris Hurring and Celine Donovan**

### **Keeping up Appearances**

Family violence is a global silent and hidden epidemic. The term the Shadow Pandemic has been coined in response to family violence worsening in the Covid climate. Globally 137 women die daily as a result of family violence, making the home the most dangerous place for women. This session will focus on developing a family violence lens to recognise family violence, and how to respond safely and effectively.

## **Kris Gagliardi**

### **Right hospital, first time: The destination decision**

This session will present an overview of NZ's out-of-hospital destination policies for high acuity patients, examples of tools to help ambulance personnel determine the most appropriate destination hospital, and what's on the horizon.

## Wendy Allison

### **KnowYourStuffNZ: The fence at the top of the cliff**

After being the first in the world to have legal drug harm reduction with the Needle Exchange in the 1980s, progress in this field in Aotearoa has languished for 30 years. Seven years ago KnowYourStuffNZ rekindled the conversation by seeing a community need and just getting out there to address it. Now, it's a recognised public health service. This talk gives a brief overview of what KnowYourStuffNZ does, how it reduces harm at events, considerations for festival medics, and what the future might look like.

## Rob Buttner

### **FOAMed in the modern world: the good, the bad, the future**

Coined over a pint of Guinness in 2012, the term FOAMed (free open access medical education) has become familiar to most of us in the medical field. Modern technology allows us to access this material in seconds from almost any location. But with ease of access comes ease of creation. Does FOAMed replace the textbook in the 21<sup>st</sup> century? How does this material “weigh up” compared to a peer-reviewed journal? We debate these concepts, and how best to integrate these resources into daily practice and education whilst maintaining a critical eye.

## Andrew Odgers

### **Out of Scope Cardiac Arrest: Case Study**

An usual OHCA, with no Intensive Care Paramedic available, was managed by paramedics. With a difficult airway and spontaneous breathing whilst under CPR, the team went out of their scope to manage the patient. What set them up for success, and would they do it again? Andrew uses this case to discuss what paramedics can do to optimise their own success, and their peers successes, when working outside their designated scope of practice.

## Dr Scott Devenish

### **How to critically appraise an article for a peer-reviewed journal**

This session focuses on how to critically appraise an article (manuscript) for a peer-reviewed journal. The session is aimed at paramedics wishing to become ‘peer-reviewers’ or for people wanting to engage with research and author a publication and would like to know more about the review process.

**James Stewart**

### **Volunteering pathways in St John**

It is your choice what path you take as a volunteer, or a student. St John Ambulance gains over 75% of all paid personnel recruited annually from current volunteers within the organisation. The reasons for this are the robust, practical skillbase that volunteering provides, as well as the opportunity volunteering provides to hone skillsets learned in a tertiary environment. Additionally, St John has volunteers responsible for metropolitan, rural and remote ambulance cover, First Response unit service delivery, and Major Incident Support Teams nationally. In these roles, volunteers provide the immediate care from a variety of angles and clinical practice levels, from Paramedic to First Responder and MIST officer. The relationship between our paid and volunteer people is something that we depend on for timely care for our patients, and this session highlights some of the benefits volunteering provides to the patient, and to the personnel supporting volunteering, from helicopter Intensive Care Paramedics to receiving hospital clinicians.

**Ryan Davis**

### **Tales of lysis: Sub acute stent thrombosis in the rural prehospital setting**

Prehospital thrombolysis has recently been introduced into the Ambulance Tasmania scope of practice and Ryan was fortunate enough to be involved in one of the first cases in which this clinical intervention was delivered in the state. This case study will review the challenges associated with this particular case whilst providing an overview of the process of successfully administering prehospital thrombolysis in Tasmania.

**Jane Goodwin**

### **The role of advance care planning in delivering care that aligns with what matters most to a person. The Canterbury experience.**

Advance care planning encourages people to think about and document what matters most to them. This session will outline the journey of advance care planning in Canterbury and share the important role our collaboration with St John has played in ensuring continuity of care and the delivery of treatment that aligns with the person's goals and wishes.

## Toby West

### **No flow or low flow?**

This case study involves a 41-year-old female experiencing breathing problems during Tasmania's North-West COVID outbreak in April/May 2020. This dynamic and challenging case highlights and discusses the importance of effective teamwork in a time critical environment, the unique challenges encountered during this case and the critical decisions which were made. This presentation focusses on the concept of 'no flow or low flow' PEA cardiac arrest management. With two paramedics, four intensive care paramedics, a retrieval doctor, and a bunch of chickens on scene, what could possibly go wrong?

## Anna Scott & Darren Khodaverdi

### **Fishing for answers in hypothermic cardiac arrest**

Our presentation will discuss a challenging water rescue and subsequent resuscitation. In particular, we will focus on the many decision points involved in both pre- and in-hospital care. We believe this to be the first NZ case of hypothermic cardiac arrest successfully resuscitated with extracorporeal membrane circulation (ECMO).

## Matt Langley

### **MN Virtual ED – Is there a better Option Than ED?**

The MN Virtual ED connects Metro North QAS, GP's and Community based Health Practitioners with senior ED consultants in near real time to facilitate non-ED outcomes wherever clinically possible. The MN VED has challenged traditional ED transition pathways for non-urgent patients by posing the question prior to arrival: Is there a better way, is there a more patient centric option? By aligning the patient to care in the right setting first time and removing the need for ED presentation, the patient and the health service benefits.

## Dr Jo Kippax and Caity Little

### **The benefits of prehospital ultrasound and solid organ fractures**

This session will discuss the benefits of prehospital ultrasound and solid organ fractures. A case presentation of a young 13-year-old boy who came off his mountain bike at speed with a sore belly will be explored.

## Ruiyi Yin

### **Shark encounter: Survival against the odds**

This presentation is a case study of a relatively rare incidence of a shark encounter, with a focus on the prehospital management and aeromedical retrieval of the patient. The presentation will also discuss factors which contributed to this patient's survival, despite a potentially fatal injury.

# RESEARCH PRESENTATION OVERVIEWS

**Matt Wilkinson-Stokes**

## **Adverse events from nitrate administration during right ventricular myocardial infarction and right coronary artery occlusion: A systematic review and meta-analysis**

Avoiding nitrates during RVMI due to the risk of decreased preload – and subsequent hypotension – is routinely taught to undergraduates. However, the evidence underlying this view is rarely considered. This session describes how a single paper with methodological weaknesses and a sample size of just 40 came to form the dominant narrative for nearly half a century, despite ongoing conflicting evidence. The results of a systematic review into the topic will be presented, and current suggestions for best practice revisited.

**Caitlin Wilson**

## **Enhancing prehospital feedback for emergency ambulance staff to promote workforce wellbeing and patient safety: A mixed-methods multiple sub-study PhD project**

This PhD explores how enhancing prehospital feedback can enrich emergency ambulance staff wellbeing, paramedic decision-making and prehospital patient safety. Drawing upon evidence from implementation science and organisational psychology, we are conducting five research studies: Study 1 (Systematic Review with Narrative Synthesis) and Study 2 (Qualitative Interview Study) have been completed, with Study 3 (Realist Evaluation of Current Practice) and Study 4 (Quantitative Survey) currently in development. Study 5 (Process and Outcome Evaluation) involves putting our findings into practice by developing and evaluating a pilot prehospital feedback initiative in collaboration with a local ambulance service in the United Kingdom.

**Caitlin Fitzgibbon**

## **Exploring 'Queerspaces' within paramedicine curriculum: The LGBTQI+ vacuum**

Tertiary education curriculum typically reflects a population that is cisgender and heterosexual. Curriculum produced therefore may not meet student needs regarding diverse perspectives, experiences, and LGBTQI+ people. This may have impacts on the clinical practice needs of students in relation to the LGBTQI+ community and in addition, the learning needs of LGBTQI+ students may not be addressed. This session will discuss a recent study aimed to examine student and academic staff perspectives on including LGBTQI+ content in paramedicine curriculum.

### **Tegwyn McManamny**

#### **Pre-hospital health initiatives to reduce the potentially preventable hospitalisation of older people in rural and regional Australia: A growing opportunity.**

Australia's ageing population has growing healthcare needs, challenging timely health service provision. In rural and regional areas, older Australians have poorer healthcare outcomes and higher rates of potentially preventable hospital admissions (PPH). Paramedics may be uniquely placed to contribute to the healthcare outcomes of rural-dwelling older adults through involvement in primary and preventive healthcare, health promotion and health education; however, roles in reducing PPH in this cohort remain largely unexplored.

### **Katie Tunks Leach**

#### **Exploring the role and value of chaplains in the ambulance service: Paramedic perspectives**

Katie will present the findings from her qualitative interviews with paramedics, exploring the role and value of chaplains in one Australian ambulance service. She will outline their experiences with a proactive and reactive model of care, and why they valued chaplain support.

### **Dr Belinda Flanagan (PhD)**

#### **An evaluation of a perinatal, infant and child grief workshop into paramedic undergraduate curriculum using the CARES skills framework**

Paramedic attendance at an infant or child death is reported as being the most distressing type of case paramedics attend. Paramedic education programs have previously reported student confidence is low when discussing resuscitation wishes, notifying family members of a patient's death, and providing support to a bereaved family. Peer social support may offer an important medium for paramedic student support when coping with these stressful situations. The study aimed to evaluate the student experience of participating in a peer social support group using the CARES framework to discuss perinatal grief and death related to infants and children.

### **Matthew Curtis**

#### **Prehospital management of pain and distress in elderly hip fracture patients**

The incidence of hip fractures is expected to increase commensurate with an ageing population. Using a systematic review protocol, this study explored prehospital techniques used to manage pain and distress in elderly hip fracture patients. In addition to reviewing common analgesic agents and regional anaesthesia techniques (such as FICB), the study found that a deep understanding of the experience of pain and distress in elderly persons is necessary if care (both pharmacological and non-pharmacological) is to be effectively tailored to the needs of this patient group.

## **Lindsey Boechler**

### **On the frontlines amidst uncertain times: Lived experiences of Canadian paramedics during the COVID-19 outbreak**

Despite the essential role of paramedics in public health emergency response, prior to the COVID-19 pandemic, existing pandemic research largely focused on the views of physicians, nurses, and hospital administrators, rather than paramedic practitioners. In this presentation we share the findings from our study where we explored the lived experiences of Canadian paramedics during the initial months of the COVID-19 outbreak and the meaning these experiences held for practitioners. We share insights gained and analyse the challenges faced and the areas considered priority by paramedics.

## **Aman Hussain**

### **Leveraging the experiences of firefighters and paramedics in Winnipeg, Manitoba: Lessons from the COVID-19 pandemic.**

We will share our findings of a mixed-methods study aimed at understanding how firefighters and paramedics are responding to and have been affected by the current pandemic. More specifically, the questions guiding this research are: (1) How are firefighters and paramedics managing and responding to the COVID-19 pandemic? (2) How are they communicating work-related information? (3) What strategies are being used to shape current practice? By answering these questions, we can begin to expose how firefighters and paramedics are currently navigating the pandemic and inform how work-related practices and information are shared and communicated amongst firefighters and paramedics.

## **Lucinda Marinelli**

### **Chronic pain management in the out-of-hospital setting**

Chronic pain is drastically different to acute pain in pathophysiology, presentation, and treatment. However, research surrounding paramedic management of chronic pain and paramedic guidelines for chronic pain presentations are very limited. Lucinda will be presenting a scoping review conducted earlier this year on paramedic management of chronic pain. This review identified four key themes crucial to holistic chronic pain management in the out-of-hospital

## **Matthew Hill**

### **Arousal, Intrusion, Avoidance: The experiences of secondary traumatic stress in partners of Critical Care Paramedics**

Paramedics experience high psychological distress as part of their daily work. To cope with this stress many paramedics rely on family support, such as talking to a partner, as a primary coping strategy. While discussing traumatic experiences may be a beneficial coping strategy for paramedics, exposure to the details of their traumatic experiences may leave their partners vulnerable to developing secondary traumatic stress. This presentation will provide an overview of my proposed research that will investigate secondary traumatic stress in partners of paramedics, with the goal to develop and pilot an intervention aimed at reducing the severity of secondary traumatic stress in partners of paramedics.



### **Associate Professor Kelly-Ann Bowles**

#### **What are the current mental health and wellbeing needs of paramedics and paramedic students.**

With the development of Special Interest Groups (SIG) within the Australasian College of Paramedicine, an important first step was to engage with members to ensure future programs and offerings best supported their needs. The Health and Wellbeing SIG completed a survey of members in 2020, establishing the current mental health and wellbeing needs of paramedics and paramedic students. Respondents indicated that self-care and resilience are the greatest mental health and wellbeing priorities at this time, and they would like to be provided support via online resources that they can use at any time.

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### **Alannah Stoneley**

#### **Accessing emergency health care for moderate to severe asthma exacerbations in rural and remote NSW.**

This session will explore what is going through patient's minds when deciding to access emergency healthcare in the event of a moderate to severe asthma attack in rural and remote NSW. We will look into what contributes to both how and when patients are deciding to seek emergency healthcare for one of the largest contributors of respiratory illness throughout Australia.

### **Michella Hill**

#### **Accessing emergency healthcare services during COVID-19: Perceptions of the Australian community**

This research explored community-members perceptions of emergency healthcare services (EHS) during public health emergencies. An online questionnaire (n = 5261) and qualitative interviews (n = 67) were undertaken during late 2020 and early 2021. The findings suggest people were less willing to engage with EHS during COVID-19 compared to before the pandemic, and people with chronic health conditions were concerned with exposure and infection. The findings from the questionnaire and interviews were utilised to develop an interactive education video for paramedics targeting communication with community-members during public health emergencies.

## **Evelien Spelten**

### **“A Known Player in a New Role” Implementing Community Paramedicine - opportunities and challenges: a review of reviews**

The development and implementation of Community Paramedicine (CP) models appears to be hindered by unfamiliarity with the role. To facilitate the integration of this important role in health care and to secure its place in the future development of the paramedic profession, it is important to identify and remove or manage unnecessary hurdles and streamline education and governance. As part of our work in developing innovative CP-led multidisciplinary models of healthcare delivery in parts of Victoria, Australia, we are undertaking a review of reviews, to identify the current evidence on opportunities and challenges to implementing successful CP models.

## **Cheryl Cameron**

### **Dealing with dying – progressing paramedics’ role in grief support**

Paramedics are frequently present around death and dying and are well positioned to provide grief support to those who are suddenly bereaved, but existing education and system resources have failed to provide paramedics with necessary tools. Although the literature emphasizes the importance of providing grief training from initial education, through clinical placements and into continuing professional development opportunities, the current state across health professions is a patchwork of elective, brief and siloed opportunities. Our discussion proposes a multi-faceted approach focusing on recruitment, initial and continuing education, and continued support in clinical practice. We suggest it is timely to address grief support competence across the full continuum of paramedic practice.

## **Vanessa Botan**

### **‘Hypos can strike twice’ – using a leaflet-based intervention to prevent recurrent hypoglycaemic episodes**

A leaflet-based intervention, 'Hypos can strike twice', was conducted in the UK by the East Midlands Ambulance Service (EMAS) to prevent ambulance attendances for recurrent hypoglycaemic episodes. This was a stepped wedge design study and its results showed that informative leaflets can have a positive effect on reducing the number of repeat ambulance attendances for hypoglycaemic episodes. The leaflet was considered useful for both patients and staff proving the importance of patient education when managing hypoglycaemia.

## **Polly Ford-Jones**

### **Safety and violence on “mental health calls”: A qualitative analysis**

Violent encounters and safety issues are a frequent occurrence in the healthcare setting, and experiences of violence are reported by paramedics worldwide. While concern for safety and violence presents on many different call types, in this study, the themes of safety and violence presented as a significant consideration on mental health calls as reported by paramedics and management. Challenges exist with the historical and ongoing understanding of those with mental health needs as violent, and equity concerns exist with regard to appropriate management of mental health emergencies. Recommendations are provided to enhance safety for both care providers and recipients.

**Sarah Sawyer**

**Management of cardiogenic shock; what can paramedics learn from current literature?**

My presentation consists of a literature review I have completed for my Honours thesis. It is common knowledge within contemporary literature that cardiogenic shock is often misdiagnosed, mismanaged, and misunderstood. It also comes with significant morbidity and mortality, which highlights the need for investigation into this prehospital patient presentation. My session will provide insight into cardiogenic shock, the pitfalls in its current management and future directions we can take in prehospital care.

**Lauren Ahern**

**Morphine or Fentanyl, is there any difference in pain management outcomes in the treatment of acute coronary syndromes?**

This session will outline the findings of the analysis of patient data comparing the effectiveness of IV fentanyl and IV morphine for pain management in STEMI patients. Potential adverse effects and variances in administration of the two drugs will also be discussed.

**Zainab Alqudah**

**Survival outcomes in traumatic out-of-hospital cardiac arrest after the introduction of a trauma-focused resuscitation protocol**

The optimal treatment approaches for managing traumatic out-of-hospital cardiac arrest (OHCA) patients remain unclear. The new published treatment guidelines were driven by consensus and highlighted the importance of addressing potentially reversible causes of traumatic cardiac arrest. However, there is still no evidence supporting the benefit of these guidelines in improving patient outcomes. In 2016, Ambulance Victoria changed its resuscitation guidelines, prioritising airway management and ventilation, control of external bleeding, decompression of suspected tension pneumothorax and fluid resuscitation, ahead of traditional cardiopulmonary resuscitation efforts.

Measuring the potential impact of changes to interventions is important for identifying the future direction of prehospital management for traumatic OHCA patients. Therefore, in this session, I will present and discuss the findings of the impact of a trauma-focused treatment protocol on survival outcomes after traumatic OHCA in Victoria, Australia, using data from the Victorian Ambulance Cardiac Arrest Registry.

**Lily Lucent**

### **Abdominal Pain in the Ambulance. Do our assumptions about low SES patients live up to reality?**

A deep dive into adult abdominal pain in the ambulance, and how it's associated with socio-economic status. We examined almost 60,000 patients over three years to answer questions like:

Who calls the ambulance? Who presents with more pain? Who gets more analgesia? Who spends longer in ED? Are initial pain scores associated with outcomes? Some of the answers may surprise you.

**Kristina Maximous**

### **Paramedic assessment of paediatric mental health problems; A need for change**

Suicide is the second leading cause of death amongst children and adolescents worldwide, and rates of paediatric suicide have remained consistent since the 1990s. Eighty per cent of young decedents who died by suicide were reported to have visited a healthcare facility in the year prior to their death. The emergency care setting, in particular ambulance services, have reported a surge in psychiatric presentations, signalling that the emergency care setting is often the first point of contact to those suffering. Yet, paramedics are underequipped with paediatric mental health screening and assessment tools. This presentation will provide an insight into existing validated tools utilised across the emergency care setting, which could potentially be recommended for Australian paramedic practice.

**Lucinda Mayor**

### **Preparedness for Professional Practice: Investigating clinical preceptors and graduates perceptions**

The “preparedness for practice” concept is difficult to quantify into a single construct. It has previously been poorly defined within paramedic and other healthcare research, with confusion apparent between the terms work readiness, preparedness for practice and road ready. The literature acknowledges factors that impede clinical learning however the impact on preparedness for practice is not clearly identified. The aim of this grounded theory study is to develop of a paramedic undergraduate preparedness for practice theory from an international, professional and academic perspective.

**Clare Sutton**

### **The mental health and stress impacts of COVID-19 on Australian paramedics**

This research investigated the impact of COVID-19 on paramedics across Australia, examining self-reported levels of anxiety, stress, depression, and burnout. The online survey also investigated potential contributors to workplace wellbeing, such as family circumstances, workplace consultation and communication and support offered by family, friends and colleagues.

## **Richard Galeano**

### **So you think you are healthy, think again**

Health improvement strategies for paramedics have previously focused on mental health related to the work that we do. The world health organisation defines health as 'a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity'. This presentation will unpack the health of paramedics and show how unhealthy paramedics really are and this health's relationship to the organisation of your work and the organisational and working environment of paramedicine.

### **Understanding the health of operational personnel in an ambulance service: A mixed methods study**

Richard will compresses seven years research into a five-minute presentation using plain language and only one PowerPoint slide. This is a crucial skill for any paramedic who is keen to evolve into a successful research career.

## **Justin Hunter**

### **Exploring situational awareness among paramedic students during high-fidelity simulation. A mixed-methods pilot study**

In this session, I will review recent research we completed measuring situational awareness among paramedic students during high-fidelity simulation. This was a mixed-methods pilot study involving 12 paramedic students from Oklahoma State University in the U.S. We will review their overall levels of situational awareness as well as how well they measured up against a proven theoretical model of situational awareness.

### **Are paramedics situationally aware? A cross-sectional study during emergency calls for service**

In this session, I will review recent research we recently completed measuring situational awareness among out-of-hospital providers during 911 emergency calls in a busy EMS system in the U.S. This was a prospective quasi-experimental before-and-after study which introduces a targeted educational approach using Crew Resource Management as an intervention. Utilizing a new quick reference tool for situational awareness, as well as new knowledge from the Crew Resource Management curriculum, we again measured their situational awareness out in the field during 911 calls. Did their levels of situational awareness change? Come and find out!