

# The Council of Ambulance Authorities

## Annual Report 2017/18



*Providing leadership for the provision of ambulance services*

# The Council of Ambulance Authorities (CAA)

The CAA is the representative body for the ten principal providers of ambulance services in Australia and New Zealand.

The Board comprises chief executives from each member service. Standing committees are selected from senior executives at each ambulance service according to their expertise and interest.

CAA works to advance the mission of ambulance services to provide excellence in pre-hospital care by pursuing strategic engagement with state, territory and national governments and allied organisations in the health sector.

CAA also provides a range of forums for CAA member services and individuals to share their ground-breaking research for the benefit of peers, the broader health community and the public.



Back row: Ross Coburn, Tony Ahern, Jason Killens, Peter Bradley

Front row: Tony Walker, Dominic Morgan, Mike Grant, Russell Bowles, Neil Kirby



## CAA's 2017-18 Annual Report exemplifies the increasing and significant role of ambulance services and paramedics in local and international arenas.

The registration of paramedics in Australia due in 2018 will formally recognise the status of paramedicine alongside 15 other health professions, with the title of paramedic protected under national law.

Our work to date with AHPRA and Paramedics Australasia among other stakeholders has addressed the standards and processes necessary for successful implementation of this significant initiative, which is on track for a timely transition. The New Zealand registration process is also progressing well with an expectation that the New Zealand Government will provide final approval to include the Paramedic profession under the Health Practitioners Competence Assurance Act (HPCA Act) before the end of 2018 allowing registration to commence in 2019.

While professional development has been an important focus for CAA so too has the mental health and wellbeing of the sector's workforce.

With Ambulance New Zealand and the National Council of Ambulance Unions (NCAU), CAA was proud to sign the *Health and Wellbeing Strategy – a resilient workforce and healthy workplace* at the CAA17 Congress in Adelaide.

As the varied and extensive demand for ambulance services continues to grow, so too does the toll on the workforce from emergency call takers and paramedics to managers and executives.

The Health and Wellbeing Strategy will help promote more initiatives in the workplace to minimise that psychological harm and support staff.

CAA's appointment as the Australasian Secretariat of the Global Resuscitation Alliance (GRA) in 2016 was a key factor in our considerable efforts to raise awareness of simple measures to reduce the death toll from Sudden Cardiac Arrest (SCA).

Programs designed for the sector and others with a broader public appeal have involved extensive planning, resourcefulness and dedication from CAA staff and services including: hosting Seattle's Resuscitation Academy (RA) in Australia for the first time at the CAA17 Congress in Adelaide; a focus on the RA ten step program to introduce life-saving measures across communities; and CAA member services' progressive launch of bystander Apps including First Responder at St John Western Australia and GoodSAM at Ambulance Victoria and St John New Zealand.

The Restart A Heart Day (RAHD) campaign was another highlight of the Secretariat's work undertaken by member services.

A national RAHD launch in Australia and New Zealand on October 16, 2017, saw 10,000 members of the public including school children, trained in CPR and the use of an AED as part of three key steps to restore a person's heart beat. Services' creative events extended from schools and airports to sports grounds and malls. New Zealand will again be the first country to kick off World Restart A Heart Day in 2018 as awareness and training events take place around the globe.

Social media played an important role on RAHD with messages reaching more than 1 million people promoted by CAA, services and allied national organisations including the Heart Foundation, the Royal Flying Doctor Service, Paramedics Australasia, the Australian and New Zealand Resuscitation Councils and our generous sponsors Laerdal, ZOLL and Stryker.

CAA also released a position statement, *Automated External Defibrillators (AEDs) in the Community*, to further encourage bystander assistance in the event of a SCA. CAA member services are progressively undertaking campaigns to locate and register AEDs in the community for quick and easy access in an emergency.

Our annual Congress and attendance at international emergency service events are other noteworthy aspects of our commitment to excellence in pre-hospital care, reinforcing Australia and New Zealand's standing as leaders in this field.

Ross Coburn, CEO of St John NT, has been an important contributor to our work of many years. His involvement over 24 years with St John including nine years as CEO has seen his extensive experience and patient commitment used to good effect for Territorians and the sector more broadly. Ross leaves the CAA Board after joining us in 2008, including two years as Chair. We thank him for his service and wish him well in the knowledge that he will continue to make a positive difference in people's lives.



**Peter Bradley**  
Chair  
The Council of Ambulance  
Authorities (CAA)

# Chief Executive's Report

## It has been an eventful year for CAA as the role of member services and paramedics continues to have growing public profile.

The imminent registration of paramedics in Australia, followed closely by New Zealand, will confirm paramedicine as a nationally recognised profession, portable across all states and territories.

CAA's work alongside other key stakeholders has been integral to ensuring an effective transition with appropriate standards and approved training requirements.

As the Australasian Secretariat for the Global Resuscitation Alliance (GRA), CAA has further contributed to raising the profile of ambulance services and paramedics as part of the life-saving campaign to reduce the death toll from Sudden Cardiac Arrest (SCA), Restart A Heart Day.

CAA and member services have played a vital role in the awareness campaign including training thousands of people to save the life of someone who has suffered a SCA.

Through the work of our Emergency Management Forum, CAA, Ambulance Victoria (AV) and the National Critical Care and Trauma Response Centre (NCCTRC) discussed the introduction of an electronic tracking device for use in Mass Casualty Incidents (MCI). TrackMi was developed by NCCTRC and has been used in local and international incidents. The NCCTRC agreed to investigate funding of an AV pilot to test the software in different real world scenarios, allowing victims to be tracked from an incident to hospital.

Mental health and wellbeing of the sector's workforce is a priority for CAA and member services.

We have continued to build on the strong relationship with beyondblue, the independent, not-for-profit organisation which works to raise aware and reduce stigma around mental health issues. In particular, we have been working with beyondblue on a national survey, Answering the Call, a world first survey of its kind for emergency service personnel including ambulance employees. The final result of the survey, which has included volunteers and family members of emergency service workers, is due to be released in late 2018.

CAA has also contributed to the Senate *Inquiry into the role of commonwealth, state and territory governments in addressing the high rates of mental health conditions experienced by first responders, emergency workers and volunteers*. Our submission highlighted that ambulance staff are key members of our society who daily put their own lives and wellbeing on the line, see some of the best and sadly worst moments in people's lives and through shift work and demanding workplace requirements often succumb to conditions that can contribute to poor mental health and wellbeing. The inquiry is another step in raising awareness of this distressing issue.

The third in a series of symposiums on mental health "Survive and Thrive 3" was an important opportunity to maintain a focus on mental health, understanding that paramedics are four times more likely to suicide than any other health professional.

The CAA17 Congress held in Adelaide was a resounding success which we look to replicate in the years ahead. The GRA Masterclass and the Resuscitation Academy were Conference highlights along with the formal launch of Restart A Heart Day 2017.

The Congress and CAA's annual Awards for Excellence play a major role in celebrating and sharing the extraordinary work and achievements of our services and their staff.

The Congress, along with all of our other commitments, would not be possible without the dedicated support of the CAA team. On behalf of the Board I extend my thanks and gratitude.

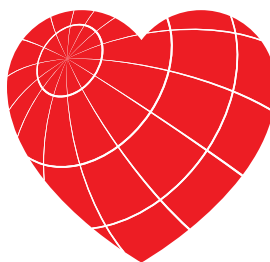
A handwritten signature in black ink, appearing to read 'D. Waters'.

**David Waters**  
Chief Executive  
The Council of Ambulance  
Authorities (CAA)

## CAA has significantly expanded its role following its appointment as the Australasian Secretariat for the Global Resuscitation Alliance (GRA) in 2016.

In this capacity, CAA has coordinated and managed a series of leading initiatives:

- A GRA Masterclass included in the CAA17 Congress, which attracted 200+ delegates across two days in Adelaide.
- The first Resuscitation Academy Network Event to be held in Australasia. The two day program included presenters from the Resuscitation Academy in Seattle.
- CAA worked with RA's Executive Director to develop the GRA website <http://www.globalresuscitationalliance.org> and collected local case studies for incorporation in the updated GRA "Call to Action" publication.
- Restart A Heart Day was a major undertaking to raise awareness of CPR and AEDs as part of the GRA's mission to reduce the death toll from Sudden Cardiac Arrest (SCA). The community-based campaign is designed to develop skills in early identification of SCA and encourage bystander intervention. In New Zealand and Australia only one in ten people survive a SCA. CAA established a working group which developed key messages and collateral, including a website and videos, for the campaign based around October 16. Stakeholder engagement was an important feature of extending the reach of the campaign messages. RAHD on October 16, 2017, saw more than 10,000 people trained in CPR and RAHD with a social media audience of 1 million.



## Global Resuscitation Alliance

[www.restartaheart.net](http://www.restartaheart.net)      [www.restartaheart.co.nz](http://www.restartaheart.co.nz)

### Emergency Stroke Care

The CAA was instrumental in organising the first meeting on Emergency Stroke Care at the Utstein Abbey in Stavanger, Norway, the site of the historic call to action for the GRA.

The meeting gathered 40 international experts to translate scientific guidelines on stroke care into practical guidelines, building on the GRA's successful program for cardiac arrest based on a template of 10 steps.

The outcomes from the meeting will be published late in 2018.

The following organisations requested CAA's participation in a range of events both locally and internationally:

- Paramedics Australasia (PAIC)
- IRCP/EMS World
- Association of Ambulance Chief Executives (AACE)
- GRA/EMS 2017
- National Rural Health Alliance (NRHA)
- EMS Infection Control and Management Summit
- Global Paramedic Leadership Mental Health Summit
- Non-Emergency Transport Symposium
- NZ Search and Rescue Technology Workshop
- AHPRA Sector workshop on Paramedic Registration
- Health Sector Resilience Network

# Committees and Forums

The CAA is represented on national, Australasian and international committees including:

- The Australian Health Protection Principal Committee
- The National Rural Health Alliance
- The Global Resuscitation Alliance (GRA) – Australasian Secretariat
- The International Round Table of Community Paramedicine (IRCP)
- The Global Paramedic Leadership Alliance

CAA's involvement in a broad range of organisations and activities ensures significant issues involving the pre-hospital sector from emergency management and health services to workforce issues are actively raised and promoted in appropriate forums.

## Ambulance Education Committee

The Education Committee has worked to maintain the program of assessment for university applications progressing through each stage of accreditation under the Paramedic Education Programs Accreditation Scheme (PEPAS) – preliminary, provisional and full accreditation.

Eighteen Australian and New Zealand tertiary institutions have had paramedic courses accredited under PEPAS.

However, the last six months of this financial year in particular, saw significant involvement with the Paramedic Board of Australia to support the implementation of registration for paramedics as health professionals.

The PEPAS Director has worked with the Board's project officer to ensure all information needed was provided to develop the new lists of approved courses, which have now been considered and ratified by the Paramedic Board.

CAA has also contributed to the national registration process in a range of other areas including:

- Establishment of the Paramedic Board
- Consultation on the five mandatory standards
- Coordination of CAA member services preparation

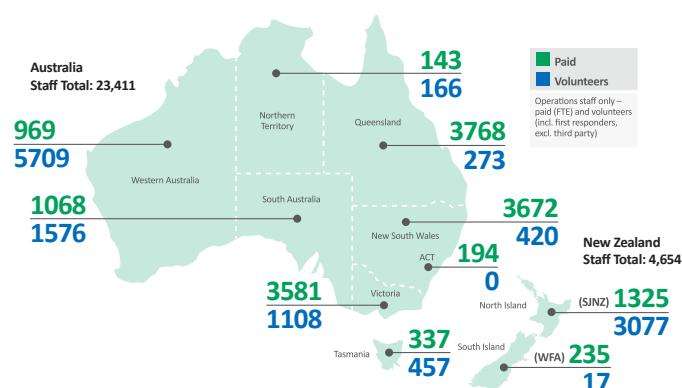
The AEC will continue to offer invaluable support and advice to inform consideration around accredited courses.

## Enrolments in paramedic courses

The table below provides an overview of enrolments in paramedic courses at accredited universities in Australia and New Zealand in 2017.

Enrolments have continued at a steady rate in line with expectations, with numbers sufficient to meet workforce requirements for all jurisdictions.

Location	2017 Enrolments
Queensland	2,950
New South Wales	1,062
Australian Capital Territory	190
Victoria	2,080
Tasmania	106
South Australia	350
Western Australia	773
New Zealand	606
<b>TOTAL</b>	<b>8,117</b>



*Operational ambulance staff and volunteers at Australian and New Zealand Ambulance services 2017-18*

## Strategic Business Committee

This committee continued to review a range of demand management initiatives in addition to addressing other strategically important issues including:

- The provision of member services' data to the Australian Productivity Commission (PC) as part of the Report on Government Services requirements – supplying 200 data elements.
- Negotiated with the PC on the introduction of new measures to streamline and improve the reporting of ambulance indicators and eliminate duplication

# Committees and Forums

- Coordinated an initial response with Australian Telco - Telstra – following a triple zero (000) followed up with meeting for member services and the Telstra Chief Operations Office and its 000 team
- Coordinated a national response to the planned airbag recall impacting the Mercedes fleet of ambulances with the Australian Competition and Consumer Commission (ACCC) and member services.

## Patient Experience Survey

After 10 years of successfully running the CAA Patient Satisfaction Survey members agreed to enhance the survey and focus on the patient experience.

To assist with the new shift, members agreed to engage a research institute to review the St John New Zealand and Wellington Free Ambulance patient survey, which had been identified as good examples to emulate.

The new survey was conducted in 2017 achieving an overall 97% satisfaction rate. The survey also generated an improved report and online portal for more comprehensive analysis for each service.

## Operations Committee

The Operations Committee continued to develop a range of performance indicators related to workforce and patient experience.

A comprehensive report on the sector's workforce including age, gender, attrition and student numbers was completed and will continue to inform the monitoring of trends and demands.

The committee coordinated a session to consider the impacts of shift patterns and changes in hours to assess how staff adapted, what worked and the involvement of unions. Monitoring will continue as the the issues are evolving.

## Emergency Management Forum

The forum assisted with significant contributions to several important projects including:

- the Australian Institute for Disaster Resilience (AIDR) new Safe and Healthy Crowded Places Handbook
- a lead role in the redevelopment of another AIDR manual on mass gatherings
- taking on the role as project sponsor with the National Critical Care and Trauma Response Centre (NCCTRC) to trial "Track Mi" – a mass casualty incident patient tracking system. The first pilot was completed by Ambulance Victoria with NSW Ambulance due to begin a second trial

- Working with NCCTRC on ways to better recognise and use paramedics' skills in emergency and disaster scenarios; and developing clinical and EM scope of practice for paramedics deployed in overseas emergency responses
- Forum members in conjunction with CAA contributed to the redevelopment of AFAC High Threat Incidents Guidelines – final document due for publication in late 2018.

CAA is represented on a number of related committees including:

- AHPPC
- ADIR Committees
- NHEMS
- AFAC Committees
- Health Sector Group (HSG) Secretariat

## Mental health & Wellbeing Working Group

Following a successful launch of the CAA Health & Wellbeing Strategy, co-signed by the CAA, New Zealand Ambulance and the National Council of Ambulance Unions (NCAU), it was adopted by the Association of Ambulance Chief Executives (AACE) UK, the Paramedic Chiefs of Canada (PCC) and the US EMS.

The group continued its work with *beyondblue* including involvement in their first and biggest survey for emergency management staff.

The mental health and wellbeing survey which has so far attracted almost 5,000 responses from ambulance services, is a ground breaking project.

CAA has negotiated with *beyondblue* to take over the survey and conduct it every second year in Australia and New Zealand and look to circulate it globally.

CAA delivered a submission to the Senate inquiry into the role of commonwealth, state and territory governments in addressing the high rates of mental health conditions experienced by first responders, emergency service workers and volunteers.

For the third year CAA partnered with PA and ANZP to organise the *Survive & Thrive 3* symposium which focuses on the mental health and wellbeing of ambulance staff.

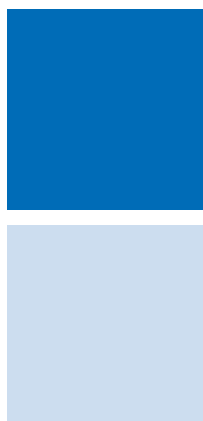
CAA members presented at the Global Mental Health Summit in the UK, showcasing some of the remarkable programs delivered by Australian and New Zealand ambulance services.



# CAA Awards for Excellence

The CAA Awards for Excellence are presented annually to recognise innovative and often ground-breaking projects generated by CAA's member services in Australia and New Zealand.

All award nominations are published in a special edition of CAA's Australasian Ambulance Magazine in the lead up to the announcement of winners at a gala dinner held in conjunction with CAA's annual conference. The 2017 finalists and winners in each of four categories, and the winner of the Star Award, are reprinted in the following pages.



# CAA Awards for Excellence

Star Award winner and winner of the Management category: Ambulance Victoria

## New Clinical Response Model

Karen Smith, Libby Owen and Colin Jones,  
Research and Evaluation and Operations,  
Ambulance Victoria

Ambulance Victoria (AV) introduced a new Clinical Response Model (CRM) following a thorough review of its Dispatch Grid - the designated level of ambulance response for each Medical Priority Dispatch System (MPDS) event code. The purpose of the revised CRM was to improve AV's resource allocation, clinical alignment of response with patient acuity, and provide a faster response to the sickest patients.

As a result of the review, an estimated 98,000 cases annually were downgraded from a time-critical/lights and sirens ambulance response.

### Background

Traditionally, more than half of all Triple Zero (000) calls for an emergency ambulance in Victoria received a Code 1 (time critical) response. However, this cohort has increasingly been recognised as having a relatively small proportion of truly time dependent patients.

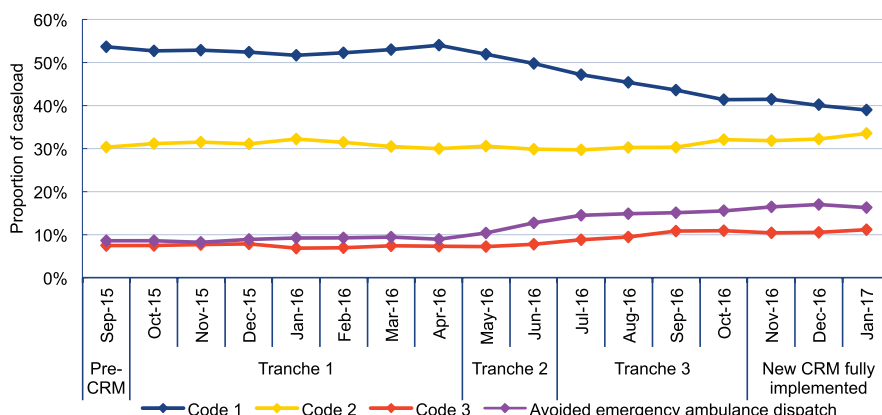
Given the ever-increasing demand for ambulance services (steady growth of 4% a year since 2008), and the misalignment between response and patient acuity, AV identified improving the Dispatch Grid as a key initiative.

### Method

The review conducted in 2015, used a combination of research, audit and clinical expertise, drawing extensively on AV's body of clinical data, one the largest electronic pre-hospital datasets in the world.

An epidemiological/clinical profile of all Code 1 (time-critical) and Code 2 (acute but not time-critical) cases was used to assess the suitability of each event type's associated Dispatch Grid response. Code 3 events (non-urgent) were deemed unsuitable as they already received secondary triage via the AV Referral Service.

The recommended changes were assessed by expert panels of senior MICA paramedics in accordance with the Australian Standard on Risk Management and reviewed by AV's Medical Director.



State-wide monthly caseload distribution

The CRM was approved by the AV Medical Advisory Committee and further reviewed by an independent multi-disciplinary advisory panel convened by the Minister for Health and Ambulance Services.

### Implementation

The implementation of the revised CRM occurred in three Tranches. The revised CRM was implemented as a project overseen by a Steering Committee, chaired by the AV Chief Operations Officer. Tranche implementation dates were subject to "go" or "no go" decision points overseen by the project team.

To accommodate the increased caseload managed by the Referral Service, staffing was increased significantly.

### Outcomes

The proportion of Triple Zero (000) calls receiving a Code 1 emergency responses decreased from 51.8% in the comparator period, to 40.5% during the evaluation of the new CRM.

Annually, this equates to almost 100,000 cases that would have received a Code 1 ambulance, but now receive a Code 2 or 3 response, or referral to an alternative or non-emergency service.

The proportion of low acuity Triple Zero (000) calls which avoided an emergency ambulance dispatch increased from 9.6% to 16.5% - approximately 50,000 cases per annum. Almost 10,000 additional patients a year will now be managed in their home avoiding long waits in emergency departments.

The revised CRM improved Code 1 response time performance by **2.5 percentage points** in the face of significant growth in demand and no significant change to paramedic resources. Importantly, this aligned with the improvement that had been predicted based on modelling of caseload distributions. In short, the revised CRM **delivered the performance gain that was expected**. Annually, this equates to an estimated **6,900** additional Code 1 cases that should now receive a response within 15 minutes.

In addition, all clinical KPIs improved.

A number of safety and quality measures were monitored including re-contact rates for non-transported patients. After full CRM implementation, 4.2% of patients were identified as re-contacting AV within 24 hours and this did not differ to the historical period (4.0%).

### Scope

The extensive electronic clinical data available to AV will be used to both monitor the effect on patient outcomes and identify further areas for improvement.

The methodology used to design and implement the new CRM is easily transferable to other large ambulance services.



# CAA Awards for Excellence

## Management Finalist

### Facebook Community Thank You Video



*Tess Tuohey, Jerome Peyton, Tom Noble, Andy Symons, Erin Marie, Emergency Operations / Media Unit, Ambulance Victoria*

Six people died and many more were injured in January 2017 when a man drove into Melbourne's Bourke Street Mall and accelerated along the pavement into the lunchtime crowd of tourists, shoppers and workers.

Dozens of selfless bystanders stopped to help the victims and assisted emergency workers where they could.

Ambulance Victoria (AV) paramedics were overwhelmed by the response, such that one paramedic manager who attended the incident wanted to say "thank you" to everyone who gave their time.

#### Background

Many ambulance services have a formal system for awarding commendations to passers-by who stop to help including AV's annual Community Heroes event at Parliament House.

On the day people died in Bourke Street paramedics had no time to thank people or formally acknowledge their assistance.

A thank you video for Facebook was a way to redirect the focus of a tragic event to address those who had acted so selflessly and connect ambulance personnel with the strangers who came to the aid of other strangers.

#### Method

The key steps undertaken in the development of the video involved refining the format and working with the AV's expert videography and editing resources.

The brief was simple. The focus was to be an opportunity for staff to say what they might have said to those who helped on the day, had things been different. They could speak about the extraordinary difference those people made to the patients, their families and to AV staff.

Staff were invited to take part in the video, using their own words.

Two videos were developed: one of two minutes duration for Facebook and a longer version of approximately eight minutes for the AV website.

View the full video online:  
[www.ambulance.vic.gov.au/thank-you-paramedics-thank-bourke-street-bystanders/](http://www.ambulance.vic.gov.au/thank-you-paramedics-thank-bourke-street-bystanders/)

The second video:  
[www.facebook.com/AmbulanceVictoria/videos/1629250063768765/](https://www.facebook.com/AmbulanceVictoria/videos/1629250063768765/)

#### Implementation

The filming of the video footage took place over one day with 34 staff filmed. Staff were encouraged to arrive early and chat with colleagues and Peer Support prior to and following the filming.

Key social media principles were incorporated into the videos including the use of subtitles to ensure maximum reach.

#### Outcomes

Staff response was overwhelmingly positive. The AV Facebook post has had 655,000 views to date (*at time of printing*) – on average AV posts have a reach of around 20,000, and a strong post about 35,000. The videos were also viewed on the Victorian Premier's Facebook and local radio station 3AW's website and featured in other media coverage.

Community comments included:

- *Please watch this video as it will restore your faith in good decent people who can step forward and care. Show your children, especially your boys...*
- *This makes me so proud to be Australian. I love Melbourne and its people. I have so much respect for the emergency services but it just goes to show that you & I can make a difference too. If we all do a little bit more we can make this world even better!*
- *So humbling to hear our extraordinary ambos saying thank you. What they do for us every day & yet still find the time to make this video. What an amazing country we live in. I love our city & this makes me so proud to be Australian.*
- *A very moving and powerful message. Thank you Paramedics, off duty doctors and all the everyday heroes who assisted in any way they could.*

#### Scope

This simple, inexpensive and modern approach was successfully produced and managed by paramedics and an internal ambulance media team.

The empathetic and heartfelt project linked a grieving, disconnected community and allowed paramedics to demonstrate their genuine regard for those they serve and for those that volunteer to help in times of need. It reached much further than any other communication efforts and successfully portrayed paramedics as the compassionate, humane and skilled carers we know them to be.

## Clinical Winner

### High-dose IM ketamine for patients with severe agitation



*Professor Stephen Bernard,  
Medical Director, Ambulance Victoria*

Recent years have seen a dramatic increase in the numbers of patients who present to ambulance services with extreme agitation following methamphetamine (Ice) use. These patients are typically restrained by police and present significant risks to themselves, police and paramedics.

Effective and rapid sedation is necessary for safe transport by ambulance paramedics to emergency departments. For many years, Ambulance Victoria (AV) paramedics used intramuscular (IM) midazolam, however used in this setting the drug did not appear to be effective. It can also cause respiratory depression.

The AV Medical Advisory Committee considered a range of pharmacological options for this challenging group of patients. There was some data to support the use of IM ketamine 4mg/kg to provide rapid sedation without significant compromise of airway reflexes or decreased ventilation.

Ketamine was already carried by intensive care paramedics in Victoria for analgesia and also as an induction drug during rapid sequence intubation for patients with traumatic brain injury and severe asthma.

#### Aim

The project aimed to introduce intramuscular (IM) ketamine for the sedation of patients with extreme agitation and determine whether a dose of 4mg/kg IM was safe and effective.

#### Method

The use of ketamine 4mg/kg IM was approved by the AV Medical Advisory Committee in June 2015 and introduced using an on-line training program in November 2015 for approximately 350 intensive care paramedics.

#### Outcomes

A preliminary review of the use and effectiveness of this drug, undertaken in June 2016, found that 31 patients received ketamine IM.

All patients had extreme agitation and presented a clear threat to the safety of themselves, police, paramedics and bystanders.

Patient characteristics included: average age 29 years (range 8-43) and 18/31 (58%) presented in a rural setting. The majority (68%) were male. The predominant factors leading to the agitation determined by paramedics were drug intoxication in 14/31 (45%), psychiatric illness in 11/31 (35%), alcohol intoxication in 3/31 (9%), post seizure in 2/31 (6%) and diabetic emergency in one patient.

The time from IM administration to effective sedation was less than 10 minutes in 24/31 (77%), 11-15 minutes in 6/31 (19%) and not stated in the patient care record in one patient. All patients were transported safely to the ED and none required intubation during transport.

Only 1/31 of the patients had some continuing agitation that was relatively mild during transport to the ED, but this patient was safely transported with police assistance and physical restraints. There were no pre-hospital adverse events, no injuries to paramedics and no major adverse effects reported by ED staff.

The use of ketamine in one paediatric patient was notable. This was administered in consultation with an emergency physician at a receiving paediatric hospital.

One important finding in this preliminary phase of the project was the considerable delays in many cases to administer ketamine, especially in rural Victoria, where a secondary response by an intensive care paramedic is needed.

The delay meant that police were sometimes required to continue physical restraint for a considerable period until an intensive care paramedic responded, placing both themselves and the patient at additional risk.

In December 2016, the AV Medical Advisory Committee approved ketamine 4mg/kg IM use for all 4,000 paramedics in Victoria to treat patients who presented with severe agitation.

A Clinical Practice Guideline, outlining the indications for this drug was circulated to paramedics and incorporated into the AV on-scene phone App.

#### Scope

A further analysis will be undertaken during 2017 when it is anticipated that approximately 200 patients will have been treated.

Results will be analysed and reported in early 2018. The results could support the introduction of IM ketamine across all Australian ambulance services for use with extremely combative and agitated patients and perhaps a change in dose for select patients.



# CAA Awards for Excellence

## Clinical Finalist

### St John Clinical Wiki

Paul O'Connell, Kirsty Mann, Daniel Ohs,  
St John NZ Clinical Development Team

The demands on modern paramedics to manage a wide array of acute, chronic and complex healthcare challenges in dynamic out-of-hospital environments means they need access to succinct, accurate information for optimal decision making.

To meet this challenge, St John New Zealand developed a quick reference tool to provide ambulance personnel with a “one stop shop” for up to date and relevant clinical information in line with St John clinical practice.

#### Background

The St John Clinical Wiki (the Wiki) has evolved in an era of ‘alternative facts’, data manipulation and the selective release of information by commercial organisations for financial gain, where it is not always possible (in the absence of robust critical analysis) to identify which information is appropriate for a local health context.

The breadth and depth of information available via mechanisms such as Free Open Access Meducation (FOAM) is vast and can be difficult to navigate. Combined with extreme variability in the quality, reported outcomes and applicability of medical research to the out-of-hospital environment, St John ambulance personnel reported that in some circumstances they were struggling to identify information relevant to their practice.

Provision of information to frontline medical staff was also an issue. The size of St John (4,500 personnel in Ambulance Operations) workforce diversity (paid and volunteer), geographical coverage (metropolitan, rural and remote) combined with variations in shift work meant that safety alerts, clinical updates and key messaging was not always received by everyone.

For these reasons it was decided that St John required a platform where all clinically relevant communication could be posted and easily accessed from any device, as an adjunct to the existing learning management system (LMS) and formal communication frameworks.



Early within the ideas phase, the concept of a Clinical Wiki was particularly appealing, as it offered an opportunity to build a collaborative platform with peer reviews and harnessed the wealth of knowledge and experience across St John, which could be shared in a controlled environment to promote clinical excellence.

#### Aim

The Wiki project aimed to create a functional, living, fun, and collaborative clinical knowledge base, that could be accessed 24/7 from any device. The information also had to be current, relevant, accurate and congruent incorporating clinical guidelines, with all articles reviewed by the St John Clinical Development Team or Medical Directorate prior to publication.

To compete successfully with other information sources and ‘Googling’ behaviours, the platform also needed to provide an intuitive user experience that was easily accessible from any device – a resource not available with the existing systems.

#### Implementation

In line with the true ‘spirit’ of a wiki, all ambulance personnel are able to create and submit articles, which are then verified for clinical accuracy prior to being published. This has created a cost-efficient mechanism for creating and maintaining high quality content and sharing best practice. The Wiki can be accessed via any device with an internet connection and

yields over 130,000 page views per year.

The Wiki, which had a soft launch in April 2015, was initially populated using curriculum from a range of internal sources including the St John Operations Risk Management Course, First Responder Course, Ambulance Driving Course, the National Diploma in Ambulance Practice program and Continuing Clinical Education learning

modules. These 500 articles have since been improved, expanded and maintained and there are now in excess of 700 articles classified into 12 libraries with additional areas for safety alerts, clinical updates, videos and podcasts.

#### Scope

The St John Clinical Wiki has been developed as a collaborative platform for both educational and operational settings. It functions independently from commercial LMS platforms, is cost effective and enables ambulance personnel to directly modify content. In the same way that the St John CPG App has been adapted, modified and launched by allied services in Australia, the Wiki is available to other ambulance services on a user pays basis by contacting [studio@stjohn.org.nz](mailto:studio@stjohn.org.nz).



# CAA Awards for Excellence

## Education Winner

## Occupational Violence Prevention Education Program

People and Culture Division,  
Ambulance Victoria

In a first of its kind for emergency services, AV is delivering state-wide, high tech training to address the growing problem of occupational violence towards its paramedics.

The training equips paramedics with the behavioural, tactical and communication skills to reduce their exposure to violence, utilising virtual reality technology.

AV paramedics report an average of 55 occupational violence incidents per month, which are significantly under-reported due to the historical acceptance by emergency workers that occupational violence is just 'part of the job.'

### Aim

The training, known internally as the Occupational Violence Prevention Education Program, aims to equip staff with behavioural, tactical and communication skills to reduce paramedics' exposure to occupational violence.

It is a component of AV's broader Occupational Violence Prevention Program, which comprises five areas of work: process improvement; communication; education and awareness; training and reporting.

### Background

A 2015 report by the Victorian Auditor General's Office (VAGO), *Occupational Violence Against Healthcare Workers*, found paramedics, and other healthcare workers, face particular risk of occupational violence because they often deal with people in stressful, unpredictable and potentially volatile situations.

Research indicates exposure to occupational violence can have serious social, health and economic impacts, not only for those immediately involved, but for the health sector more generally.

AV confirmed that metropolitan regions have the highest rates of occupational violence incidents where incidents are within 5 km of the Melbourne CBD; the

highest level of aggression occurs on Friday and Saturday nights; and the equivalent of 711 operational shifts were lost to occupational violence incidents over three years.

### Method

Analysis of real incidents by a new Occupational Violence Incident Review Group highlighted that in the vast majority of cases paramedics had become separated from their partner and that they continued with their job even when there was information to suggest their safety was a risk.

A baseline cultural survey also showed:

- More than 72 per cent of AV respondents had experienced occupational violence
- Almost 39 per cent of staff believed the job requires them to accept the risk of occupational violence
- Almost 54 per cent of staff did not believe they would be supported by management if they refused to attend a case where there was reports of occupational violence
- Almost 40 per cent of staff reported having an emotional response after being subjected to occupational violence.

### Implementation

Standout features of the training include:

- The technology allows paramedics to be immersed in scenes where the danger feels real, without leaving the safety of the classroom
- The training is done in a short time – rolled out state-wide to 3,700 paramedics in three months – in anticipation it will hasten cultural change
- The training resonates with the workforce because it is being delivered by experts in hostage and crisis negotiation, critical incident management, special operations and close personal protection
- The training data is based on real incidents.



The technology aides give participants a 360-degree view of potential violence hazards including weapons and aggressive people, as if they were at the scene and resonates in ways a PowerPoint presentation or a video cannot.

### Outcomes

Early incident reporting analysis, following implementation of the training, suggests behaviour change is occurring, and by inference that inroads are being made to a culture shift whereby occupational violence is no longer accepted as 'just part of the job'.

Early data suggests a 50% increase in the number of reported occupational violence incidents.

Conversely, AV is starting to see fewer assaults and more instances where occupational violence situations were identified early and avoidance strategies successfully implemented.

### Scope

In addition to developing the training program, AV is a leading contributor to the Government's Occupational Violence Reference Group established in response to the Victorian Auditor General's Report. Joint initiatives will strive to improve community knowledge of the impact occupational violence and highlight the need for appropriate and respectful behaviour.

# CAA Awards for Excellence

## Education Finalist

### St John First Responder program

*Toni Heal, Clinical Program Co-coordinator,  
Daniel Ohs, Assistant Director of  
Operations – Clinical and the St John  
New Zealand Clinical Development Team*

While this was initially effective over time it became apparent that the course was not meeting expected outcomes, and importantly New Zealand Qualifications Authority (NZQA) unit standards were not awarded, meaning there was little external recognition available to those who completed the program.

A review in 2013 resulted in an overhaul of the program to incorporate blended learning supported by online learning, a reduction in the tutor to learner ratio and the opportunity to position St John to allocate unit standards in the future.

A targeted review of qualifications was undertaken simultaneously by the Skills Organisation, an industry training organisation and St John partner, to ensure that the qualification framework for vocational training in the ambulance sector was fit for purpose.

#### Method

St John engaged in and contributed to the review with a number of key employers and industry stakeholders including Ambulance New Zealand, Wellington Free Ambulance, Surf Lifesaving New Zealand and the New Zealand Red Cross.

After much feedback from these stakeholders, the Level 3 New Zealand Certificate in Emergency Care (First Responder) qualification was finalised in late 2015.

Once the framework was developed, St John set about ensuring that it was acceptable to St John learners, the ambulance sector and community stakeholders alike.

Launched in April 2016, the 40 point certificate sits at Level 3 on the NZQA framework. To earn the NZ Certificate in Emergency Care learners must complete a mix of online and face to face (in class) learning supported by frontline clinical exposure and the completion of a work book.

In its first 12 months, 509 learners had completed the Certificate. A further 701 learners are actively working their way through its requirements. The Certificate has become an effective mechanism to not only expand and maintain the

current pool of First Responders, but also to provide volunteers with a formal qualification on the NZQA framework.

#### Aim

The project aim was to create and implement an educational framework which enabled an externally recognised qualification to be formally issued and it sought:

- To enhance patient outcomes by strengthening clinical and educational frameworks
- Support volunteer sustainability within St John by enabling volunteers to gain formal external recognition for learning completed at St John
- Enable 'stair-casing' of educational qualifications within the NZ ambulance sector
- Create a sustainable First Responder program relevant to allied emergency services that support St John in the provision of out-of-hospital emergency care.
- Access additional Crown funding opportunities through the introduction of an industry qualification which can attract funding to aide St John in sustaining its educational outputs
- Support diversity with a qualification available to St John learners from all cultural and socio-economic backgrounds.

#### Scope

St John plans to roll the Certificate out across the remainder of its Clinical Operations and extend the program to its Fire and Emergency First Responders .

It intends to evaluate the feasibility of making the Certificate available to other groups operating within or supporting the ambulance sector, including allied ambulance services, Surf Life Saving NZ, search and rescue, Coastguard and ski-patrollers. St John is amenable to meeting with Australian services should the program be of assistance in developing or extending first responder frameworks.



*The path to First Responder*

St John New Zealand has established a new certificate level formal qualification to address shortfalls in the training of the first responder workforce.

St John operates a wide reaching First Responder framework with 1,550 St John and more than 500 Fire and Emergency New Zealand First Responders, the overwhelming majority of whom are volunteers.

However, until recently, first responder training was not recognised under any formal educational frameworks.

The training program was originally introduced in 2009, replacing the longstanding Pre-hospital Emergency Care (PHEC) course and later adapted to allow students to focus on aspects relevant to their roles such as frontline ambulance, events, patient transfer or community first response.



# CAA Awards for Excellence

## Technical Winner

## Rosters Kiosk - Vacancy Manager



Jamie Barnes, Systems and Innovation Specialist, Rosters Department, AV

*Jamie Barnes Systems and Innovation Specialist, Operational Resourcing Department, Ambulance Victoria*

A Rosters Kiosk developed and implemented by Ambulance Victoria (AV) has been enhanced with a new feature to help cover vacant shifts.

The Vacancy Manager Module was added to the Kiosk to increase efficiency and improve the interaction between the operational staff and the roster department, which may need to cover up to 200 additional individual shift vacancies on any given day.

Anecdotally, operational staff were happy to work overtime on their day off provided they had advance notice. Short notice makes it harder for staff to change plans and therefore to have vacancies filled.

A key aim of the Vacancy Manager module was to minimise phone contact with paramedics on their days off to ensure an improved work-life balance as well as greater efficiency in the management of short-term vacancies.

### Background

The Rosters kiosk functionality was initially limited to viewing rosters and arranging shift swaps

Telephone calls were the primary form of contact between operational staff and the rosters department concerning individual shift vacancies.

On occasion, operational staff would receive unwelcome multiple calls about shift vacancies while on rostered days off. Missed opportunities and staff frustration was common.

### Method

A new position - Systems of Innovation Specialist - was responsible for the Rosters kiosk project that had an emphasis on ease of use for both operational and rosters staff.

A collaborative approach on design within Rosters and operational staff ensured all options were explored with only fit-for-purpose features implemented.

Simplicity of use was a high priority.

Highlighting employee skills and qualifications to match people to specialist shifts was another important feature.

When logging in, the default screen shows a new offer or allocation. An action/response is required before employees can access other areas of the kiosk, thereby ensuring timely responses to offers.

### Implementation

In phase 1, staff were encouraged to log on by offering advance overtime shifts. Staff could accept or reject, and nominate a preference for payment or time in lieu.

Following implementation, news of the new vacancy allocation system spread which led to a jump in the number of individual logins from 800 a day to 1,200.

This ensured prompt staff replies which provided the organisation with an earlier and clearer picture of future resourcing.

The second phase involved notifying staff surplus to the roster where they would be sent for a reserve or spare shift.

A clear implementation strategy was introduced to support unallocated staff with the advanced notification system for their shifts.

A video created by AV's media department explained the changes and attracted more than 1,000 views on the intranet – at the time the most viewed video released by the media department.

A training package was developed and delivered to roster staff along with individual training sessions. Policies were updated and new procedures formalised.

### Outcome

During the initial rollout between 80 and 100 overtime shifts were offered directly to employees' Kiosks approximately 3-4 weeks in advance.

There was a conservative expectation of responses within 3-7 days but in the first month, 86% responded within 48 hours and only 1% greater than five days. The figures have remained consistent. Acceptance of overtime shifts began at 69% and increased to 80%.

The increased acceptance rate has reduced the work load for the rosters team enabling them to focus on more efficiently balancing employees' needs with the requirements of operational resourcing. Offers or allocations now account for up to 400 shifts a day with individual staff logins topping 3,000 a day.

### Scope

A new Rosters Kiosk module is being implemented to allow staff to apply for and receive approval for accessing single days off (SDO) or to access time in lieu (TIL) for future shift changes.

This module will lead to a significant reduction in manual processing of requests for the rosters department and give operational staff instant approval for days off.



# CAA Awards for Excellence

## Technical Finalist

## Rural Mobile Data Terminal Refresh Rollout Project

Radio Telecommunications Capital  
Project Team, NSW Ambulance

NSW Ambulance serves more than 7.5 million people across 801,600 square kilometres, making it the world's third-largest ambulance service.

In 2016, facing spiraling maintenance costs due to end-of-life communications equipment and the imminent closure of Telstra's 2G GPRS network, ambulance vehicles needed to undergo re-equipment with new technology – hardware and connectivity – all without disrupting services.

NSW Ambulance undertook the Rural Mobile Data Terminal (MDT) Refresh Rollout Project to replace the out-dated vehicle data communications equipment and ICT infrastructure, and needed to find an interim network solution until the implementation of Future State MDT network in 2018-19.

### Background

NSW Ambulance's fleet of MDTs and the supporting back-end infrastructure was more than 10 years old and required increasing maintenance to ensure ongoing critical functions including duress alarms, vehicle location information and data network coverage.

The NSW Ambulance Rural Data Radio Network (RDRN) was scheduled for closure on 16 December 2016. This potentially meant that critical incident data could not be transmitted to front-line responders.

The Mobile Data Radio Network (MDRN), provided by the NSW Telco Authority, was due to conclude at the end of 2016, with a replacement service only being introduced in late 2018-19.

This Project provided an interim solution for that 24-30 month gap.

### Method

Extensive consultation was undertaken with internal and external stakeholders to gain a comprehensive understanding of the project objectives, technical requirements and risks.



Meetings and presentations with operational staff members flagged potential issues around implementation logistics and communications.

Pilot testing informed the choice of technology, devices and bearers to be used in the project and allowed network operations to be maintained. Road tests conducted over eight weeks used four decommissioned ambulance vehicles to test a variety of new and existing technologies and devices in various configurations. Each vehicle travelled approximately 18,000 kilometres and four drivers clocked up 1,800 hours of driving.

A change management strategy for consultation with stakeholders was developed, and timely and effective communication with NSW Ambulance staff has been key to the success of the project.

### Implementation

- NSW Ambulance had nine weeks to upgrade 808 vehicles in rural NSW.
- Due to the complexity and logistical challenges, operational sectors were divided into 35 clusters, each with around five stations and 25 vehicles.
- The delivery phase involved more than 50,000 kilometres of vehicle movement; more than 2,500 hours of specialised project and safety management.
- At the peak of the rollout, installation crews were completing installation on 42 vehicles per day. The maximum weekly completion rate was 212 vehicles, and at the peak, 10 crews were operating concurrently.

### Innovations

- The new technology has multiple functionalities and redundancies that allow communication data operators to mitigate the risk of communications technology failure.
- The MDT hardware provides each vehicle with a secured Wi-Fi hotspot allowing future opportunities to streamline technology and devices.
- The new communications platform provides remote access for over-the-air firmware and software upgrades, reducing the need for hands-on time with vehicles in workshops.
- The technology is scalable, allowing easy enhancements and upgrades.
- The project has provided a framework for standardising fleet vehicle build-out procedures.

### Outcomes

- Most importantly, no ambulance operations were disrupted due to the Telstra 2G GPRS network shutdown.
- The NSW Ambulance fleet will run a single, consistent platform across all operational, MDT- equipped vehicles state-wide.
- The transition removes dependencies on the existing MDRN (Mobitex) private network in metropolitan locations.
- Improvements in the rural areas will be available to the metropolitan mobile data equipment.
- Vehicle build procedures and equipment can now be standardised.

Additionally, the successful delivery of this Project provided NSW Ambulance with a solid, proven methodology for other time-constrained technology rollouts across a dispersed geographical area.

The project continues to receive accolades from ambulance staff who appreciate the greater functionality and reliability that allows them to continue delivering the best possible emergency care to the community.

# Publications

Australasian Ambulance Magazine available at [www.caa.net.au](http://www.caa.net.au)





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