

## 2019 Emergency Services Foundation Scholarship

*A Global Exploration and Evaluation of the impact major traumatic emergencies have on unwitting participants during and after incidents in highly populated wilderness and remote tourist locations with the aim of identifying and implementing effective mental wellbeing coping strategies.*

**Marcus Warner**  
Deputy Controller – Bright Unit  
**Victorian State Emergency Service**



(Combined SES and CFA Technical Rescue of fallen sightseer – Beechworth Gorge August 2019)

## Executive Summary

Social mobility and the rise of social media has resulted in more and more people exploring the outdoors and, in particular, wilderness areas. Globally, getting off the beaten track has become a popular pastime of not just adrenaline seeking athletes but ordinary tourists in search of the next big thrill or great Instagram shot. This increase in visitation has also seen an increase in accidents and emergencies with this being felt right across regional Australia. It has personally impacted my SES unit in remote regional North East Victoria with a marked increase in requests for assistance by emergency services required to respond to accidents and emergencies often including seriously injured casualties in popular tourist locations with multiple witnesses.

Within regional VICSES, responses to incidents in the wilderness have seen an increase in the need to reach out to the wider community post an event to try and manage PTSD associated with impact of these emergencies on an ever-disparate tourist population often traumatised by events. At present we have an ad hoc approach to dealing with witnesses at each and every incident with varying degrees of success often with poor consistency as it is often down to the individual to implement. This feedback has been echoed across other agencies within Victoria who often focus solely on the casualty.

There are well established and documented guidelines and procedures in place for dealing with the post trauma effect of major casualty emergencies in metropolitan areas, road crash, suicide and mass gathering events across Australia and worldwide with strong supporting evidence that early intervention can minimise the severity of mental illness. Little, if any primary or secondary research has been conducted in wilderness or remote tourist hotspots. By conducting both qualitative and quantitative research the aim of this research was to ascertain if any known guidelines and procedures are currently in place and if these are having an impact. Also, to see if there are global and regional comparisons in the approaches taken by first-response agencies, municipalities and tourist regions and what level of success they have when dealing with witnesses to wilderness trauma.

The findings of this research highlighted a number of different approaches taken by first responders in Europe and North America compared to Australia and New Zealand when dealing not just with the casualty, but the entire arena impacted by the event, especially the witnesses. One particular finding demonstrated that there is a greater level of knowledge and understanding by the general population to what exactly happens during a wilderness rescue, and what is expected of them post event, along with processes they can follow, thus helping to minimise the likely psychological impact it may have on the witness. This was very evident in popular tourist mountain towns across the UK, Europe and USA where this research was conducted. **Based on these findings, the following recommendations are offered:**

### Emergency Services First Responders

- Have a collective response to all participants of any wilderness emergency contained within the impact zone. This can and should include repatriating all witnesses away from the area and back to their nearest township or accommodation with support available on their return. This has resourcing implications addressed in the study.
- Additional training for first responders especially at the incident control level along with a set of joint SOP's to ensure that this repatriation is built into any response when first turning out. This includes insights into the size of the impacted party and any other potential witnesses along with giving early mental health first aid. Explore the Trauma Witness Model as a possible framework.
- Develop a simple set of transferable collateral such as trauma cards to be left with all witnesses on scene.
- Increase public visibility and education of what first responding agencies are doing during a wilderness rescue. This was a significant focus of UK and European agencies who utilises mainstream media such as television documentaries, social media and expos/live demonstrations in popular wilderness locations and towns.

### General Public

- Increase the access and availability the public have to regular publicity and media surrounding the work search and rescue agencies do in wilderness areas with a focus on education and options to seek help.
- Provide the public with easy access to trauma counselling services with specific wilderness accident experience
- Educate the public on risk management and preparedness for wilderness exploits as a preventative measure

### Emergency Management Victoria

- Review the 000 caller options for Request For Assistance in wilderness areas to include Mountain Rescue and Coast Guard, thus allowing for an increase in awareness and efficiency to the type of incident and the likely impact it has
- EMV to explore a specifically trained and deployable wilderness response team similar to various European mountain rescue models to be better equipped for

### Tourist Agencies and municipalities

- To educate tourists and stakeholders including accommodation providers in better awareness of available mental health trauma counselling services and to identify signs of PTSD among guest/visitors

### Victorian State Emergency Service

- Review SOP's for wilderness assist agency with an emphasis on managing multiple witnesses

## Acknowledgments

A study of this nature and its findings are the combination of support from both personal relationships and professional agencies and the generosity of the ESF and their board for creating the environment to courageously explore difficult and challenging topics in an already difficult and challenging sector. In addition, I have to thank all those agencies and volunteers who I met in person and liaised with via phone, text and email for giving up their valuable time to assist. A large number of these professional have now become good friends.

I would like to personally thank my employer, The Australian Pumpkin Seed Company in Ovens and the husband and wife team of Jay and Sharan who own it who graciously support my volunteering with VICSES without question and continue to support the unit financially whenever they are called upon.

Finally, all the agencies and individuals listed below your contribution to this research is invaluable and your generosity and hospitality was incredible.

- Victorian State Emergency Service
- Victoria Police – Search & Rescue
- Ambulance Victoria
- Surf Life Saving Australia
- Bondi Rescue
- Tourism Victoria
- Alpine Shire Council
- Tourism North East
- Great Ocean Road Regional Tourism
- Peloton de Gendarmerie de Haute Montagne (PGHM – Chamonix & Briançon, France)
- Sécurité Civile – French Interior Department
- Ecole de Militaire de Haute Montagne – Chamonix, France
- Mairie Chamonix- Mont Blanc
- Air Zermatt – Zermatt, Switzerland
- St Anton am Arlberg Mountain Rescue – Austrian Alps
- Cortina Dolomites Mountain Rescue – Italy
- Cote D’Azur Coast Guard – France
- Aberglaslyn Mountain Rescue – Porthmadog, Wales
- Llanberis Mountain Rescue – Snowdonia, Wales
- Langdale Ambleside Mountain Rescue Team
- Scottish Mountain Rescue
- Torridon Mountain Rescue
- Scottish Police
- Her Majesty’s Coast Guard – United Kingdom
- Teton County Search and Rescue – Jackson, Wyoming USA
- Yosemite Search and Rescue (YOSAR) – National Parks U.S.
- Channel 4 Television
- BBC Television
- Red Bull TV
- Beyond Blue
- Victorian Department of Health & Human Services



## Background

The incentive and motivation for this study came from a random message I received on Facebook in 2017. First, some context that led to this message. I have been with the Victorian State Emergency Service for 5 years and have a long-standing relationship with wilderness exploits since childhood. As a first responder in a predominantly Alpine response area we would be called to several rescues every year involving seriously injured casualties at popular tourist hotspots such as waterfalls and lookouts.



One such rescue in January 2017 involved a teenager who ignored all the warning signs at Eurobin Falls on Mt Buffalo and fell approximately 30 metres onto hard granite sustaining severe trauma. This accident occurred on a typically hot day in Summer where relief from the 40-degree temperatures felt across the state were often found by locals and tourists by being higher up in the mountains. This day was no different. Approximately 100 tourists and locals were present enjoying the falls when they witnessed the casualty fall.

This was a standard multi-agency response with crews from VICPOL, Ambulance Victoria, Bright SES, Porepunkah and Bright CFA and often Parks Victoria/DELWP on hand to assist. On average most of the first responders are volunteers including ACO's, CFA and SES. And while 12-20 highly trained first responders seem a lot, we often call upon the help of willing participants on scene to help with the manual handling.

It can take up to 90 minutes to locate, stabilise and extricate the casualty. Often all done by hand or utilising a single wheel mule under the stretcher due to the rugged nature of the terrain. They are then carried via ambulance to a waiting HEMS helicopter several kilometres away and then flown to Melbourne. This is seen as a "normal" rescue we would do several times per year. Standard debriefing followed the incident and all agencies depart the scene.

Often, we get follow up questions from VICPOL and Parks Victoria in the days after the event, especially around the actions and behaviours of those directly involved in the incident. For example; did they cross fences and barriers to gain access to the falls? Was there suspicion of alcohol or drugs? What was the water level in the falls? Was it for a "selfie" when they slipped? Etc We would then with permission of all relevant stakeholders publish a factual Facebook post of the types of jobs the unit has been doing to better educate the community and share best practice. This approach has garnered excellent feedback from both professional first responding agencies who critique and share techniques of similar rescues to members of the public who wish to understand more or see it as an opportunity to maybe volunteer their time with the various emergency services.

Several months passed and numerous rescues of a similar nature have been conducted, some with better outcomes than others. And then one morning I wake up to a Facebook private message from a gentleman called "Pierre" (Anonymised for the purpose of this paper) from Leon in France asking if I was the same "Marcus Warner" who volunteers for the Bright SES? My curiosity led me to respond and it became very clear that Pierre was present on that hot January day in 2017 and witnessed with his family the accident described above. It did not take long for me to ascertain that the impact this accident had on Pierre was still present and he was struggling to cope with the psychological impact. In fact, I learnt he and his family cut their holiday to Australia short and returned home early. He informed me that he was too scared to return to his local mountains and take his family on hiking trips. After a few additional messages and some mutual connections in France he sought some professional help via his doctor who recognised and diagnosed PTSD and prescribed a course of action and started the road to recovery.

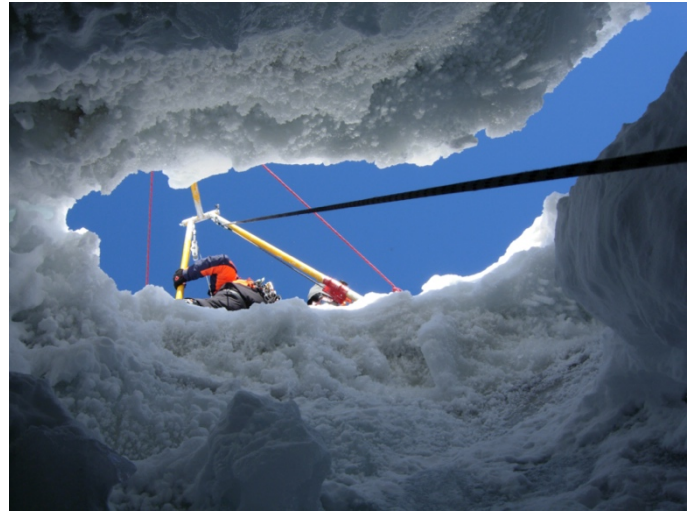
This message and the subsequent correspondence with Pierre led me to investigate how and why this situation could have occurred. Initially I sought answers from my SES peer group who all had a similar story to share highlighting that they were often sought out by unknown witnesses looking for closure or a friendly shoulder to lean on sometimes several months later.

Widening the research net often pointed me to studies and processes and procedures that have been conducted or put in place for more standard or common trauma events such as road crash, mass casualty events like terror attacks or earthquakes, drownings at popular beaches and incidents occurring in metropolitan areas. And the majority of these approaches regardless of agency or in which country they occurred often had good results in dealing with the collateral fall out felt by witnesses on scene when dealing with their mental wellbeing.

It soon became clear that there is potential to close this gap when dealing with the psychological effects of major trauma witnessed by multiple persons in wilderness areas where more ad hoc approaches are often taken with varying degrees of success from none or poor through to some excellent follow up work by professionals soliciting great outcomes for all.

## Introduction

Approximately 40%<sup>1</sup> of the North American population is exposed to at least one traumatic event during their lifetime. Exposure to traumatic events may be short-lived (e.g., a car accident) or sustained and repeated (e.g., sexual abuse). Several studies have reported strong association between experiencing of traumatic events and developing post-traumatic disorder (PTSD). While the link between experiencing traumatic events and PTSD seems well established, the impact of witnessing traumatic events and acquiring PTSD is not clear. This is alarming as approximately 25% to 30% of individuals who witness a traumatic event<sup>2</sup> may also develop PTSD and other forms of mental disorders including depression. Approximately half of the individuals who develop PTSD continue to suffer from its effects several years later.



Several different preventative approaches have been examined especially with road crash survivors and witnesses due to the large data pools available. The first approach includes studies that have applied one-session interventions to injured road crash survivors within a short interval following the traumatic accident. For example, Conlon, Fahy, and Conroy (1999)<sup>3</sup> examined the impact that a single counselling session had on individuals presenting to a trauma centre immediately following a road crash. In this trial, none of the participants sustained injuries serious enough to warrant hospitalization. Participants were given a 30-minute counselling session, which encouraged the expression of emotions and thoughts about the accident, as well as education about PTSD and possible coping strategies (psychological debriefing). The results showed a lower incidence of long-term depression and anxiety than those who sought help.

Another approach is to utilise materials and collateral readily available at the incident site that can help guide and direct witnesses to seek further help. Again, the road crash environment has utilised cards that can be left with victims and other witnesses to roadside trauma with positive outcomes when assessed against no action taken by first responders.

The type of trauma witnesses can be exposed to in the wilderness environment, on paper, seem to reflect those felt across the general population in more urban areas. The key difference identified prior to the aims and scope of this study being finalised was two-sided. The disparate groups of witnesses (mostly tourists) and the infrastructure in place to identify them coupled with the wide-ranging areas from which they originated and ultimately returned post the event.

The Bourke Street incident included one half of this problem, namely a large disparate population witness to a terrible event. But it was possible to track down the majority of witnesses immediately after the event or the following days via technology along with other measures put in place for those who returned to the scene of the incident by utilising support services such as the Australian Red Cross<sup>4</sup>.

In the wilderness arena, this was identified as being an almost impossible measure due to the remoteness of the incident to large populations and resources that could be deployed at short notice.

In order to evaluate and identify if there are more robust and proven approaches carried out by emergency services who respond to remote wilderness rescue, I sought the support and guidance of the Emergency Services Foundation via their annual granting of a study scholarship. I was successful in securing funding and support as an SES volunteer to explore this topic as it was felt it would add insight and value to the emergency services community in their key strategic area of focus, namely mental wellbeing.

I chose mountain rescue agencies with a long lasting and mature heritage in responding to casualties that have helped to define the 'gold-standard' in operations. The agencies identified were across multiple locations globally and a mix of volunteer, state run and corporate entities.

## Research Aims

The report aims to:

- Ascertain if any guidelines or processes and procedures are in place across wilderness rescue agencies.
- Identify if these approaches are having an impact in minimising the level of psychological trauma felt by witnesses.
- Draw comparisons at a global and regional level of best practice approaches taken by agencies that can be used to develop frameworks for Australia and Victoria.
- Develop global relationships to further share, research and explore potential strategies that are fit for purpose in the wilderness arena.



## Scope

The scope of this research is to identify any potential local agencies that currently have a process for witnesses in place that work in wilderness areas. The best example of this was the role Surf Life Saving Australia has in place for casualty handling in large mass gathering places such as Bondi Beach. Here, resources are deployed to not only manage the casualty but also inform and educate what is happening to up to 30,000 visitors per day. Their approach includes the use of technology, including loudspeaker announcements and text messaging right down to volunteer resources to help clear beaches and minimise impact felt by as many bystanders as possible. While valuable data, the crossover to wilderness arenas was less applicable due to technology and resourcing constraints.

In order to maximise this study, contact was made with leading mountain rescue agencies in USA, Canada, France, Italy, Switzerland, Austria, New Zealand and the United Kingdom. The aim was to visit and understand their approaches to rescue work in their respective countries.

It became clear from early desk research along with the sheer size of the problem that any face to face contact would need to focus on one continent that had the highest density of mountain rescue agencies. The study took me to Europe and the United Kingdom during the Summer months of 2019 thus maximising the number of contacts and minimising the length of time needed to complete the travel. It also coincided with the busier periods that emergency services are called upon due to mass migration and long Summer holidays to all parts of the continent.

Agency visits scheduled over 3 weeks of travel included:

- Peloton de Gendarmerie de Haute Montagne (PGHM – Chamonix & Briançon, France)
- Sécurité Civile – French Interior Department
- Ecole de Militaire de Haute Montagne – Chamonix, France
- Mairie Chamonix- Mont Blanc, France
- Air Zermatt – Zermatt, Switzerland
- St Anton am Arlberg Mountain Rescue – Austrian Alps
- Cortina Dolomites Mountain Rescue – Cortina, Italy
- Cote D’Azur Coast Guard – France
- Aberglaslyn Mountain Rescue – Porthmadog, Wales
- Llanberis Mountain Rescue – Snowdonia, Wales
- Langdale Ambleside Mountain Rescue Team
- Scottish Mountain Rescue – Cairngorms, Scotland
- Torridon Mountain Rescue, Fort William, Scotland
- Scottish Police – Edinburgh, Scotland
- Her Majesty’s Coast Guard – Devonport, England

## Methodology

Face-to-face interviews were scheduled 2-3 months in advance of meeting coupled with a pre-meeting questionnaire sent via email 2 weeks prior to arrival.

18 agencies were selected across 8 countries with between 1 and 5 key personnel from each organisation scheduled for interview. All but two agencies met with me. Those that were unable were due to ongoing operations during my time of visit and the chance to reschedule was not possible due to a tight timetable of travel.

Several key interviews were scheduled on the fly due to the fortuitous chance of meeting rescue agencies and emergency services personnel during my transit days.



Key personnel identified included rescue agency commanders, team leaders, operational experts including medics, technical rescuers, pilots, dispatchers, tourism industry leaders, mayors, event organisers and municipal leaders.

As the research progressed and due to the dynamic nature of the rescue arena in which these agencies operate, I also participated in a number of rescues myself which then allowed the scope of the project to stretch to interviews with witnesses in real time.

Also, due to the long Summer days encountered during July and the history of local and regional festivals I was also able to witness and participate on a number of emergency services expo's and demonstrations occurring in mountain towns and resorts. This added a new element to the education category identified below.

In total 62 interviews over 23 days were conducted lasting between 15 minutes (cut short due to a real-life rescue) and over 3 hours (due to my participation in a real-life rescue) with the average lasting 45 minutes but ultimately dependent on availability and workloads of participants.

All interviewees were recorded where permitted and notes written up and entered into a summary framework focussing on the following 5 main areas identified during the desk research:

- **Collateral** – What signage, leaflets, cards and other materials were utilised and given to witnesses on scene.
- **Education** – Emergency Services Agencies created and delivered education programs to their local communities including expos and live demonstrations to show the public what type of work occurs during a rescue
- **Rescue Techniques and SOP's** – What incident management techniques did they utilise on scene including managing mass witness repatriation approaches
- **Media** – Majority of agencies visited appear or have appeared in mainstream television documentary or TV shows and have a high-profile social media presence carefully curated and moderated by dedicated staff
- **Third Party Involvement** – Tourist organisations, accommodation providers, call takers and trauma counselling services

All data collected was qualitatively analysed and partitioned into the above segments for further analysis to see which approaches had the most effect when managing witnesses. Due to the varied nature of the data collected it was only possible to identify trends and approaches that were deemed effective by the individual agencies.

In addition, I collected data from numerous witnesses to rescues I wittingly participated in during my time in Europe and the UK. Specifics were carefully removed to maintain confidentiality but again trends were identified based on needs of those bystanders who felt they were impacted by events they witnessed. The witness count I interviewed ranged from 1 participant who was climbing solo on the Matterhorn and saw another climber fall from the summit through to over 500 individuals, families and parties who observed a male fall on the climb up a well-known rock path on the UK's most populated mountain.

## Findings

It became very evident after the first couple of interviews that there is an increased maturity to European and UK wilderness rescue agencies. In fact, several of the agencies visited including the PGHM (Peloton de Gendarmerie de Haute Montagne – Chamonix) and Air Zermatt in Switzerland have celebrated over 60 years of operation. Furthermore, the Austrian Mountain Rescue Agencies are some of the oldest volunteer bodies in the world dating back nearly 130 years due to the effects felt by remote communities impacted by avalanche.

This heritage and legacy clearly allow these agencies to build up systems and processes more robust and operationally effective in dealing with complex rescues when compared to younger more fledgling agencies found in the Southern Hemisphere purely due to the number of rescues and experience gained.

This played out in the data collected during the interview process. Time and again the interviewees referenced the need to view the incident arena in which they frequently operate as one large field with multiple casualties regardless of injury.

Data collected from agencies that respond to crevasse rescue and avalanche in all, but the most difficult of conditions, were to remove all parties from the mountain. The purpose of this was to ensure that after they left the scene no one was left behind that may develop symptoms of shock or PTSD resulting in them becoming additional latent casualties to be rescued at a later date. In some cases, this can be parties up to 50 persons requiring major transit of personnel from difficult locations.

In Chamonix, where the two separate agencies, the PGHM and the Sécurité Civile share alternating weekly responsibility for rescues on Mont Blanc they have increased the size of their operating base to accommodate these returning parties with chaplain and counselling services brought it from local authorities to deliver mental health first aid on repatriation. This is currently jointly funded by the state government and the local department overseen by the local Mairie. They are currently planning the construction of an education and trauma counselling centre to allow this approach to be further developed and researched along with picking up any potential missed witnesses via drop-ins. The trials of this were occurring during my visit with subjective results showing positive outcomes.

49/53 interviews all recognised the need to pro-actively repatriate all parties where possible from the incident scene especially when the incident resulted in major trauma or fatality. Often these types of incidents were avalanche, crevasse fall, BASE jumping, paragliding or mountaineering accident where the participants and their parties were often experienced and had good mountain craft. Anecdotally the majority stated that if they didn't make the effort to execute this approach that often they would receive a further call out sometimes several hours later from the same party impacted due to the onset of shock or anxiety and fatigued. The ability to execute the mass transit of so many individuals was often expedited by two main factors. The ubiquitous use of helicopters often multiple during the incident and the reliance on resort management boards to utilise ski lifts and other transportation assets such as busses. The funding models and the way they are remunerated were briefly explored but were too complex to be captured in this study.

Data shared from 8 mountain rescue agencies in 4 countries interviewed, showed responses to rescues at known lookouts or highly populated vantage points needed to be treated slightly differently to alpine accidents. They highlighted that education of witness on what had occurred, how they may feel and options they have when leaving the scene was a common practice. This approach had well developed, and utilised SOP's built into their command and control structure. It was backed up by physical collateral similar to what is used in Australian road crash incidents. It was often a small credit card sized laminate that could be disseminated to multiple persons quickly and efficiently. Each of these cards had advice on potential mental health related symptoms, key coping techniques and contacts for local counselling services.

One common practice regularly carried out by 13/18 agencies was to further educate their local towns and regional centres by the use of expos and demonstrations. These were as elaborate as whole day set ups advertised to the wider community including tourists, where they would put on hourly demonstrations of rescue techniques for their most common rescues often using more dramatic assets such as helicopters and rappel crews. I was invited to attend the joint rescue services day on a long weekend in Chamonix which had stadium style temporary seating in place to cater for over 10,000 visitors. Interviews with the





event organisers from within the rescue agencies shared their aims with me. The purpose was two-fold. Firstly, by showing the public what actually occurs during a patient rescue and recovery, their evidence shows that should any member of the public be involved in a similar incident or be witness both first and second hand to an incident, they are better prepared to deal with and recover from the event. This feedback is backed up by evidence to show that community resilience can be built up on long term exposure to these types of events. Secondly, they aimed to create a sense of pride in their rescue agency from the local community, which helped to further their resilience and endorsement of responding to these types of rescues.

The French, Swiss and Austrian stakeholders I interviewed all recognised that while accidents are unfortunate, they do happen in wilderness locations but the tourists are the economic lifeblood to their communities so they need to support their rescue colleagues via better education and not be seen as roadblocks to certain authorities that are trying to “tame” the wilderness playgrounds by shutting the mountains to recreational pursuits.

In 4 of the main mountain resorts that I visited – Chamonix, Zermatt, Ben Nevis and Cortina they rely entirely on tourism for their income. If a major incident occurs resulting in a multiple casualties and fatalities they have mechanisms in place to alert local accommodation provider by email or text message to look out for their returning guests and be aware of any potential signs or symptoms of PTSD. They are then informed of what procedures to follow including encouraging their guests to seek professional support.

Throughout the Summer months, festival season is in full swing in Europe and I was able to witness over 12 local rescue agencies all putting on demonstrations of their core skillsets when dealing with wilderness rescues for the crowds. Again, the purpose is to educate and build resilience with the festival attendees around what is considered a dynamic and often traumatic event when presented with an accident in the mountains. Another area the rescue agencies target to further educate the public is via mass gathering sporting events. During my visit to the Mediterranean coast I attended a leg of a global offshore yachting competition. The event organisers used the post-race show to give multiple coast guard rescues demonstrations utilising helicopters and IRB's along with interviews on the big screens setup on the promenade, Again several thousand attendees were able to gain a better understanding of what is required when involved in a rescue of this nature.

Feedback from the majority of interviewees saw the emerging role of media to further build awareness and education for the general public when dealing with accidents in wilderness areas. 6 of the agencies I visited have been or are currently involved in being portrayed on television by documentary makers highlighting the type of work they do. The most popular in terms of the viewership with over 50 million views in 70 countries was the 8-episode portrayal of Air Zermatt called “The Horn” created by Red Bull TV. The aim of the show was to highlight the unique service Air Zermatt carries out as a commercially run rescue service covering the majority of the Swiss Alps all year round. Interviews with the CEO, pilots and medical team all shared the importance the show had on those people they rescued who had already seen an episode. The impact of the accident and the subsequent rescue were all met with greater knowledge by the victims and witnesses along with a sense of calm urgency from all involved. They are currently researching the data to see if those with a greater understanding of what is happening around them cope with the long-term effects of the accident better than those who are not so well informed.

Research shared with me from a producer of the mainstream show “The Mountain” shown on the BBC across the UK in prime time highlighted the importance of educating the public of the type of work mountain rescue emergency services and their approaches they take. The format builds upon shows already in the mainstream dealing with more popular emergency services work such as highway patrol and ambulance services. The majority of respondents all believe the more the public are aware of what happens during a rescue, the better they will be able to cope and share with friends, colleagues and professionals should they need to seek support in the coming days, weeks and months after being witness to a wilderness rescue.

A key consideration when exploring the impact these mainstream shows have on the public in Europe and the UK is that the awareness by the public of the control agencies responsible for mountain and wilderness rescue is much more recognised than in Australia. In fact, in 6 of the countries visited there is the option when calling their equivalent on 000 is to be given up to 5 choices of service, 2 more than we currently have. Typically, in France, Italy, Austria and Switzerland along with UK you have the option of “Police- Mountain Rescue” and “Coastguard” as a matter of course. Again, this furthers the potential awareness and understanding of the roles involved in a rescue in remote areas.



An opportunity arose to interview members of the general public who witnessed a number of accidents during my deployment with a number of mountain rescue agencies. The scenario for most was that they were on vacation and therefore felt a larger degree of relaxation and potential for complacency when entering into the wilderness. For those that witnessed an accident, the common response most frequently highlighted was that they saw the multi-agency response as one agency – Mountain Rescue or Alpine Rescue or in the case of an accident on the Matterhorn, that Air Zermatt was coming for them. Their understanding of what was happening around them was not considered new due to their heightened awareness to the type of work the agencies carry out day to day. Additional feedback was echoed by the interviews with local residents on the ground that day. They felt a sense of pride and respect for the rescuers. In fact, some respondents saw it as a badge of honour to be witness to a rescue carried out by Air Zermatt or the PGHM.

Across the board, the majority of interviewees regardless of their skills or lack of professional medical qualifications all recognised the need for early intervention from the impact of mental health and wellbeing when witnesses were confronted with a major accident.

The majority of on the ground advice given by the rescue agencies, first responders and other stakeholders including the tourist operators whether delivered verbally or contained on counselling materials included some if not all of the following points:

#### **Give yourself time**

- It takes time - weeks or months - to accept what has happened and to learn to live with it. You may need to grieve for what (or who) you have lost.

#### **Find out what happened**

- It is better to face the reality of what happened rather than wondering about what might have happened.

#### **Be involved with other survivors**

- If you go to funerals or memorial services, this may help you to come to terms with what has happened. It can help to spend time with others who have been through the same experience as you.

#### **Ask for support**

- It can be a relief to talk about what happened. You may need to ask your friends and family for the time to do this - at first, they will probably not know what to say or do.

#### **Take some time for yourself**

- At times you may want to be alone or just with those close to you.

#### **Talk it over**

- Bit by bit, let yourself think about the trauma and talk about it with others. Don't worry if you cry when you talk, it's natural and usually helpful. Take things at a pace that you feel comfortable with.

#### **Get into a routine**

- Even if you don't feel much like eating, try to have regular meals and to eat a balanced diet. Taking some exercise can help - but start gently.

#### **Do some 'normal' things with other people**

- Sometimes you will want to be with other people, but not to talk about what has happened. This can also be part of the healing process.

#### **Take care**

- After a trauma, people are more likely to have accidents. Be careful around the home and when you are driving.

## Recommendations

This first-hand experience has led me to make the following recommendations that have implications for different areas of responsibility.

### Emergency Services First Responders

- Have a collective response to all participants of any wilderness emergency contained within the impact zone. This can and should include repatriating all witnesses away from the area and back to their nearest township or accommodation with support available on their return. This has resourcing implications addressed in the study.
- Additional training for first responders especially at the incident control level along with a set of joint SOP's to ensure that this repatriation is built into any response when first turning out. This includes insights into the size of the impacted party and any other potential witnesses along with giving early mental health first aid. Explore the Trauma Witness Model as a possible framework.
- Develop a simple set of transferable collateral such as trauma cards to be left with all witnesses on scene.
- Increase public visibility and education of what first responding agencies are doing during a wilderness rescue. This was a significant focus of UK and European agencies who utilises mainstream media such as television documentaries, social media and expos/live demonstrations in popular wilderness locations and towns.



### General Public

- Increase the access and availability the public have to regular publicity and media surrounding the work search and rescue agencies do in wilderness areas with a focus on education and options to seek help.
- Provide the public with easy access to trauma counselling services with specific wilderness accident experience
- Educate the public on risk management and preparedness for wilderness exploits as a preventative measure

### Emergency Management Victoria

- Review the 000 caller options for Request For Assistance in wilderness areas to include Mountain Rescue and Coast Guard, thus allowing for an increase in awareness and efficiency to the type of incident and the likely impact it has
- EMV to explore a specifically trained and deployable wilderness response team similar to various European mountain rescue models to be better equipped for

### Tourist Agencies and municipalities

- To educate tourists and stakeholders including accommodation providers in better awareness of available mental health trauma counselling services and to identify signs of PTSD among guest/visitors

### Victorian State Emergency Service

- Review SOP's for wilderness assist agency with an emphasis on managing multiple witnesses

## Conclusions

As the world shrinks and the need to be at one with nature, we will see a continued increase in the number of people visiting the great outdoors. This will continue to be met with a greater demand on emergency services to travel further into more remote areas, more frequently to extricate casualties.

Our awareness of the ever-growing problem surrounding the impact of mental illness on the general population, we now know that exercise and recreation pursuits are a healthy antidote to these issues. The irony is that in some cases the opportunity to seek more and more extreme pursuits will lead to a minority of people being exposed to some form of trauma the more time they spend in the mountains



The impact these rescues have on both victims and witnesses along with the demands on the first responders requires as much urgent attention as any other type of rescue scenario currently unfolding in metropolitan areas. In fact, it could be argued that the gap between the level and quality of mental health services found in cities versus regional centres is greater than ever. This further compounds the impact felt by accident victims and their unwitting participants who often take holidays to the remote locations.

The aim of this research was to see what is currently out there in this field and to see what learnings can be garnered and implemented in the short to medium term across Victoria and the wider emergency services sector. I hope that this paper identifies that we can do much better to manage vicarious trauma to witnesses of traumatic events in Victoria's wilderness area as we continue to show off the beauty and ruggedness of our state to the rest of the world.

## Footnote:

One interesting difference identified between emergency services not explored in the initial scope of the study was the access the first responders have to counselling and peer support services for themselves. This was very evident within those agencies that have a defence or military background. It is worth noting that they get little if any support for their work. In one case the PGHM (Chamonix - France) only get one phone call consultation per year with a remotely located psychologist. And they cover Europe's most deadly mountain. This is very much retrograde compared to the work they do for casualties and witnesses and also when compared to our set up in Australia and specifically the Victoria State Emergency Service that is working very hard to support its staff and volunteers in this space. We have maintained a network and I have been sharing our procedures with the French government with great interest from senior stakeholders. This is something I will continue to follow up.

## References

- 1 - Meichenbaum D. A clinical handbook/practical therapist manual for assessing and treating adults with post-traumatic stress disorder. 1994
- 2 - Yehuda R, Resnick H, Kahana B, Giller EL. Long-lasting hormonal alterations to extreme stress in humans: normative or maladaptive? Psychosomatic medicine. 1993;55:287-297.
- 3 - Conlon, L., Fahy, T. J., & Conroy, R. (1999). PTSD in ambulant RTA victims: A randomized controlled trial of debriefing. Journal of Psychosomatic Research, 46(1), 37-44
- 4 - <https://www.redcross.org.au/getmedia/Collective-Trauma-Event-Guidelines-2019.pdf>

Annexure

Examples of the impact mountain rescue agencies have on mainstream media.

