

members to staff different positions within the MEOC. The MEOC was activated for an incident response within the MPRDHRS region with many lessons learned.

**Conclusion:** The MEOC is a new, developing system augmented to meet the needs of regional partners. The system was developed using feedback and ideas from partners, process improvement experts, and internal team members. Additionally, lessons learned from incidents and applications of drills, workshops, and exercises will be shared to leverage within any organization.

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### Catastrophes and Cultures: Differing Approaches, Differing Responses

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**Introduction:** The Merriam-Webster Dictionary describes culture as “the customary beliefs, social forms, and material traits of a racial, religious, or social group.” Also noted are: “the characteristic features of everyday existence (such as diversions or a way of life) shared by people in a place or time.” Much has been written about the impact of culture on disaster risk and response. However, the issues are complex and multifactorial.

**Method:** The author/presenter extensively reviewed current qualitative and quantitative literature regarding the impact of culture on disaster phases of mitigation, preparedness, response, and recovery.

**Results:** There are over a thousand publications on the issue of culture and disaster. While it is clear culture plays a role in the phases of disaster management, there continues to be debate as to the weight which should be placed on culture, or whether it can be seen as separate from other elements which significantly impact phases of disaster, including political, economic, technological, geophysical, etc.

**Conclusion:** With subject matter expertise based on lived and academic experience, the presenter plans to utilize a tabletop format to engage small groups in discussion of the above concepts as well as their experiences relating to catastrophes and cultures. The hope is that this format will spur further translational research interest.

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### Effectiveness and Use of Avalanche Airbags in Mortality Reduction Among Winter Recreationists

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**Introduction:** The number of backcountry skiers and snowboarder surged in the last years, especially during the

COVID-19 pandemic, as ski resorts shut down. Inevitably, this led to an increase in avalanche-related injuries and death. As avalanche rescue device, avalanche airbags are increasingly becoming part of the standard winter mountaineering equipment.

**Method:** This study provides a review of available data and an updated perspective on avalanche airbags, discussing their function and efficacy to reduce mortality and their limitations.

**Results:** Causes of death in individuals caught by avalanches are multiple. Airbags seem to reduce mortality by decreasing chances of critical burial, the most determining risk factor. However, there is scarcity of reliable scientific research on the topic, and the way in which airbags reduce mortality and to what extent is still debated. Several elements seem to influence airbags efficacy, and their use still yields several limitations linked to manufacturing, proper use, users education, and risk compensation.

**Conclusion:** Avalanche airbags seem to be an important tool in reducing mortality in backcountry expeditions. However, more research and standardized data collection is needed to fill the knowledge gap, mountain communities should promote adequate education of winter-recreationists on how to prevent and react to an avalanche, and on the correct use of airbags in combination with already available tools such as transceivers, probes and shovels, and manufacturing companies should ensure higher efficacy of the survival avalanche equipment for better prevention of burial, asphyxia, and trauma.

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### Prehospital Ketamine Administration for Trauma Patients Results in more ED Intubations

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**Introduction:** The use of ketamine in the prehospital setting has increased with EMS providers. Adverse effects of prehospital ketamine administration have not been well-established in the trauma population. The objective of this study was to evaluate the effects of pre-hospital ketamine on trauma patients presenting to a Level 1 trauma center. This study hypothesized that respiratory depression or oversedation from ketamine would increase the number of ED (Emergency Department) intubations.

**Method:** A retrospective chart review of adult trauma patients receiving prehospital ketamine from 2016–2021 was performed. Patients with severe traumatic brain injuries were excluded. A 1:1 propensity match was performed of patients with similar demographics, injury severity, and mechanism of injury who did not receive prehospital ketamine. Univariate analyses were used to compare the groups. The primary outcome was the incidence of intubation in the Emergency Department.

**Results:** Seventy-four trauma patients who received prehospital ketamine were identified. The average ketamine dose was 39 mg IV and 226.4 mg IM. 35.1% of patients received ketamine for pain while 29.7% received it for agitation. The ED intubation rate was higher in the prehospital ketamine group with 17.6% (n=13/74) requiring intubation as compared with

4.8% (n=3/63) who did not receive ketamine (p=0.03). Patients who required intubation in the ED had higher average doses of both IV/IO (37.7 +/- 4.8 mg vs. 55.0 +/- 24.2 mg) and IM ketamine (196.4 +/- 41.7 mg vs 290.0 +/- 41.3 mg).

**Conclusion:** ED intubation rate was higher in the ketamine group. Patients that were intubated had received higher ketamine doses on average. Further studies are needed to understand and refine prehospital dosing and indication protocols to allow for more efficacious utilization of pre-hospital ketamine in trauma patients. A multicenter trial is ongoing.

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### Development of the Irish Paramedicine Education and Research Network (IPERN): Overview of Activity 2021-2022

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**Introduction:** The Irish Paramedicine Education and Research Network (IPERN) is dedicated to collaboratively building research culture and research capacity for out-of-hospital care in Ireland and internationally. IPERN is led by an inter-professional team of paramedics, nurses, doctors, allied health professionals and scientists. IPERN supports clinicians to bridge the theory-practice gap through involvement in research training, knowledge generation, knowledge translation, evidence implementation, policy setting, research partnerships, co-production and research leadership. The aim of this study is to quantitatively describe the activity of IPERN in the first two years of its foundation (2021-2022).

**Method:** This is an observational study and data was collected prospectively throughout 2021 and 2022. Data on event attendance was collated via the Event management software

EventBrite and supplemented with minutes from IPERN Committee meetings. Data analysis was performed in Microsoft Excel and comprised descriptive statistics.

**Results:** The IPERN Team comprises 14 inter-professional members of whom nine (64%) are paramedics. To date IPERN has launched seven special interest groups; Medical, Trauma, Pediatrics, Mental Health, Human Factors, Medical Logistics and Equality Diversity & Inclusion. The network hosted 14 CPD events from March 2021 to November 2022. In terms of research capacity building, the work of IPERN has been presented at six international conferences and the IPERN Team has successfully secured four grants since the foundation of the network.

**Conclusion:** Due to the complex and multidisciplinary nature of out-of-hospital care a strategic and collaborative approach to research capacity-building is essential. Underpinning evidence-based practice is a strong research culture and it is imperative that all clinicians involved in out-of-hospital care have the opportunity to develop knowledge and expertise. IPERN takes a participatory approach to research and our events provide an open and friendly platform for members to engage in research, building a vibrant research community both in Ireland and internationally.

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### Dedicated COVID-19 Hospitals in the State Security System of Poland

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**Introduction:** The pandemic caused by the SARS-CoV-2 virus, which has been rapidly developing globally since the beginning of 2020, has forced individual states to take many restrictive decisions aimed at stopping the pandemic and controlling the crisis situation. In Poland, the strategy of fighting the pandemic in the initial phase covered the entire country and was based primarily on preventive mechanisms to identify and quell the pandemic.

**Method:** A retrospective analysis was conducted incorporating media and a literature review. This retrospective analysis was performed using legal acts and press resources and other media reports to investigate every province of Poland.

**Results:** This research describes one element of the state security system tasks, that of securing an appropriate number of hospital beds for COVID-19 patients. The process focused first on establishing both the purpose and tasks of dedicated hospitals followed by discussions of the potential problems related to the functioning of these specialized facilities for patients infected with SARS-COV-2 virus. Primary attention was given to ensuring both the security of the crisis situation and the diligent monitoring of the current epidemic

**Conclusion:** In order to effectively use human and infrastructural resources, it was crucial to implement objective, unified