

Abstracts of Tabletop Presentations-22nd Congress on Disaster and Emergency Medicine 2023

TABLETOP PRESENTATIONS

How People with Hearing Disabilities Deal with Collective vs. Private Emergencies

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Introduction: People with hearing disabilities (PwHDs) often do not receive the warnings sent out to the general community during emergencies. Our goal was to identify the obstacles preventing PwHDs from accessing vital information in routine circumstances and during general emergencies.

Method: This study was conducted from November 2018 through July 2020. We used a mixed-methods approach. The qualitative portion consisted of a standardized, open-ended interview with 19 PwHDs from various socio-economic backgrounds, religions, areas of residence and levels of hearing disability about coping with emergency situations in Israel. Grounded theory was used for analysis of the findings. The quantitative portion consisted of a cross-sectional survey of 288 PwHDs focused on perceptions of their self-efficacy in dealing with emergencies, methods of communication and accessibility of services. Using the Qualtrics survey platform with Israel sign language videoclips that included subtitles in straightforward Hebrew increased the participation. The statistical analysis was conducted using SPSS ver.23.

Results: Most respondents explained that their responses differed depending on whether the emergency is collective or personal.

1. Collective emergencies: Events such as earthquakes or wars that affect everyone. Most solutions provided to the general population are not accessible to or suitable for PwHDs.

2. Private emergencies: PwHDs often encounter personal emergencies such as difficulty asking for help on the street, the inability to contact call centers or the difficulty in obtaining accessible information from organizations.

Conclusion: The distinction between types of emergencies requires the development of different resources for dealing with routine issues and public emergencies. The latter affect PwHDs less than private emergencies. Standards of accessibility must be established for places providing services both during the day and at night, such as emergency rooms, telephone service centers, clinics, etc. These standards are the basis that which will allow for PwHDs to communicate independently.

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An Effective, Functional Approach to the Medical Operations Coordination Cell Structure

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Introduction: Effectively responding to an incident across jurisdictions and coordinating with regional and jurisdictional partners is extremely challenging. The COVID-19 pandemic exemplified the need to develop an operational structure which would serve as a regional medical operations hub. Although there has been guidance for using a Medical Operations Coordination Cell (MOCC), the concept can be difficult to apply and develop for the specific needs of varying regions and jurisdictional entities.

Method: The Mountain Plains Regional Disaster Health Response System (MPRDHRS) has developed a Medical Emergency Operations Center (MEOC) to address gaps in response coordination efforts across the six state Region VIII within the United States. This MEOC has been developed to synchronize and integrate existing systems and processes to manage the medical components of a response. This center is similar to other MOCC concepts. However, in a novel approach, the MPRDHRS organized a response framework that focuses on functional roles based on the specific needs of our region with response coordination and personnel availability. This organization is similar to the use of emergency support functions in a jurisdictional EOC.

Results: While developing the MEOC, a local Lean team collaborated with the MPRDHRS on continuous improvement initiatives. Drills, workshops, and exercises were used to test the MEOC and offer just in time training to MPRDHRS



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