

of warfighters and vulnerable civilian communities are inversely proportional to quality access to a viable medical evacuation chain. The military inspector is one option to fill the gap in pre-hospital medicine to reduce morbidity and mortality by providing damage control resuscitation/surgery (DCR/DCS).

Method: Qualitative and quantitative methodologies are applied. Qualitatively describing the medical evacuation of Shane, providing death estimates of the point of injury to receipt of DCR/DCS. Provide interoperable care across the military-civilian and humanitarian sectors. Describe the standardized and consistent evacuation chains across the entire battlefield from the point of injury to the Role 1/Role 2 echelons of care.

Results: The medical evacuation chain for this current iteration of Russian violence is currently inadequate, not standardized, not well integrated at the military-civilian interface. Preventable morbidity and mortality from conventional Russian weapon systems have increased.

Conclusion: Armed Forces of Ukraine to engage with NATO and EU colleagues to acquire the methodology and practical applications to reduce preventable morbidity and mortality. Standardized approaches to the concept of damage control resuscitation and damage control surgery to the paradigm of tactical combat casualty care can help reduce morbidity and mortality. The Ukraine crisis and Russian war is killing people in Ukraine, prehospital medicine must address and focus on reducing preventable causes of morbidity and mortality.

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Developing Prehospital Care in India—A Potential Model for Low- and Middle-income Countries

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Introduction: Road traffic accidents and natural disasters cause significant numbers of deaths and life-changing injuries in low & middle-income countries. Most of these countries have limited resources for pre-hospital care and training. In 2021, there were 155,622 deaths due to road accidents and >18,000 railway-related deaths. Natural and manmade disasters also contribute to high numbers of serious injuries and deaths in the region. India is the pilot for developing an international training course for prehospital trauma care.

Method: A review of pre-hospital care training and ambulance services in Tamil Nadu and Kerala states of India was carried out in 2019. An international workshop on developing pre-hospital care in India was held in Chennai in October 2022. The workshop included experts from UK and India and 52 practitioners from various parts of India.

Results: India has developed a country-wide ambulance service sub-contracted to private providers under a public-private partnership initiative and in addition, there are private and

charitable providers. In-transit care and resuscitation are limited and the vehicles are primarily a transport mechanism with a scoop-and-run policy. Infrastructure, traffic congestion, rural and hard-to-reach areas, poorly equipped ambulance services and variations in training and scope of practice contribute to the challenges of providing high quality pre-hospital care.

Conclusion: There is a need for high-quality pre-hospital care training, regulation and continuing professional development within the pre-hospital care sector. Delivery of pre-hospital care could be reinforced by wider involvement of doctors such as General Practitioners and other allied health care professionals. It was agreed by all delegates and speakers that an international course on pre-hospital care based upon an existing UK course from the Faculty of Pre-Hospital Care of the Royal College of Surgeons of Edinburgh, edited to take account of India's current resources, should be piloted in Chennai in 2023.

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Characteristics of Patients Treated by Helicopter Emergency Medical Services in Ireland from 2012 to 2022: A Retrospective Analysis of Ten Years of Data

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Introduction: A dedicated primary scene landing Helicopter Emergency Medical Services (HEMS) has been in operation in Ireland since 2012. Commencing with a unique collaboration between the Irish Aer Corps and civilian Emergency Medical Services (EMS) it has expanded to include a second charity funded model in the south west of the country. Both services operate under a single governance and dispatch system and provide an Advanced Paramedic level of care to the patients they serve. There is limited published literature on prehospital care in Ireland and to date no detailed descriptive study of patients treated by HEMS in Ireland. This research describes the characteristics of the patients treated by HEMS in Ireland.

Method: This retrospective study will investigate the data of an excess of 8000 patients responded to by HEMS (2012–2022) in the republic of Ireland. Descriptive statistics will be used to interpret patient demographics, geographical spread, receiving facilities, mechanism/etiology of disease or injury, vital trends, transportation decisions and clinical interventions and short-term clinical outcomes.

Results: Early stage data extraction shows seasonal variation in HEMS use with increased use in the summer months. Almost twice as many male patients vs. females were treated by HEMS while the most common age profile was 55–65 yrs. Trauma presentations have increased over the past 10 years and now account for over 60% of the overall caseload. The most common medical etiology was cardiac arrest or post resuscitation care

followed by STEMI Care, the most common trauma cases were from road traffic collisions followed by falls and farm accidents.

Conclusion: This study will be the first to describe the overall characteristics of HEMS patients in Ireland over a decade of service provision. As the Irish health system continues to evolve, so must its aeromedical services.

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Prevalence and Risk Factors for Workplace Violence in the Ambulance Service

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Introduction: Workplace violence within the ambulance services is a serious problem. A prevalence of up to 8.5% of all ambulance missions has previously been reported. Prior research used a retrospective design and the knowledge of risk factors for workplace violence is weak. Therefore, the aim of the current study was to measure the prevalence of workplace violence within the ambulance service in a Swedish region.

Method: This was a prospective cohort study using data from all ambulance missions in a region in Sweden during one year. The data was analyzed with descriptive and analytic statistics using SPSS.

Results: Data was collected from 28,648 ambulance missions. A total of 209 unique workplace violence incidents were reported, corresponding to a prevalence of 0.7%. Seventy-three of all incidents reported physical violence and 161 verbal threats, where some of the incidents included both physical and verbal violence. The most common risk factors for workplace violence were: the perpetrator was under the influence of alcohol or drugs (70.5%), mental illness (60.5%) and communication problems (15.3%). The perpetrator was most often a man (n=68%) between 18 and 29 years of age. Co-variation between the risk factors was high. No significant differences in the occurrence of workplace violence could be seen in relation to time of the year, weekday, or time of day.

Conclusion: The prevalence of workplace violence was one of the lowest reported. An understanding of risk factors could be used within the ambulance service and dispatch centers to identify situations with an increased risk of workplace violence and mitigate the risk of such incidents.

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Association Between Ambulance Prehospital Time and Maternal and Perinatal Outcomes in Sierra Leone: A Countrywide Study

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Introduction: Sierra Leone, one of the countries with the highest maternal and perinatal mortality in the world, launched its first National Emergency Medical Service (NEMS) in 2018. We carried out a countrywide assessment to analyze NEMS operational times for obstetric emergencies with access to timely essential surgery within 2 hours. Moreover, we evaluated the relationship between operational times and maternal and perinatal mortality.

Method: We collected prehospital data of 6,387 obstetric emergency referrals from primary health units to hospital facilities between June 2019 and May 2020 and we estimated the proportion of referrals with a prehospital time (PT) within 2 hours. The association between PT and mortality was investigated using Poisson regression models for binary data.

Results: At the national level, the proportion of emergency obstetric referrals with a PT within 2 hours was 58.5% (95% CI 56.9% to 60.1%) during the rainy season and 61.4% (95% CI 59.5% to 63.2%) during the dry season. Results were substantially different between districts, with the capital city of Freetown reporting more than 90% of referrals within the benchmark and some rural districts less than 40%. Risk of maternal death at 60, 120, and 180 min of PT was 1.8%, 3.8%, and 4.3%, respectively. Corresponding figures for perinatal mortality were 16%, 18%, and 25%.

Conclusion: NEMS operational times for obstetric emergencies in Sierra Leone vary greatly and referral transports in rural areas struggle to reach essential surgery within two hours. Maternal and perinatal risk of death increased concurrently with operational times, even beyond the two-hour target, therefore, any reduction of the time to reach the hospital may translate into improved patient outcomes.

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Survey on Applications of Emergency Medical Drones

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Introduction: Traditionally, helicopters or special types of airplanes have been used to transport emergency patients when an aeromedical transport is necessary. However, despite its excellent utility, the cost of each flight is relatively expensive and has many limitations. So as an alternative to traditional aircrafts, there has been a movement to overcome the limitations of traditional air transport through the development and application of emergency medical drones. In this study, practical applications of emergency medical drones were investigated.

Method: As a first step, through literature and internet searches, the current state of development, field of use, results, and problems of emergency medical drones were investigated. Based on this first investigation, a second Delphi survey of