

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

*Magnus Viking PhD(c)<sup>1,2</sup>, Karin Hugelius PhD<sup>2</sup>, Lisa Kurland PhD<sup>2</sup>*

1. Region Örebro County, Örebro, Sweden

2. Örebro University, Örebro, Sweden

**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

*Marta Caviglia<sup>1</sup>, Giovanni Putoto<sup>2</sup>, Andrea Coniti<sup>1</sup>, Francesca Tognon<sup>2</sup>, Amara Jambai<sup>3</sup>, Matthew Vandy<sup>3</sup>, Ives Hubloue<sup>4</sup>, Francesco Della Corte<sup>1</sup>, Luca Ragazzoni<sup>1</sup>, Francesco Barone-Adesi<sup>1</sup>*

1. CRIMEDIM - Center for Research and Training in Disaster Medicine, Humanitarian Aid, and Global Health, Università del Piemonte Orientale, Novara, Italy

2. Doctors with Africa - CUAMM, Padova, Italy
3. Ministry of Health and Sanitation, Government of Sierra Leone, Freetown, Sierra Leone
4. Research Group on Emergency and Disaster Medicine, VUB, Brussel, Belgium

**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

*Soon-Joo Wang MD, PhD<sup>1</sup>, In Byung Kim MD<sup>2</sup>*

1. Hallym University, Hwaseong, Korea, Republic of
2. Myongji Hospital, Goyang, Korea, Republic of

**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