

Global Research Highlights

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Annals of Emergency Medicine

www.acep.org/annals/

Official journal of the American College of Emergency Physicians

Occupational Accidents Among Search and Rescue Providers During Mountain Rescue Operations and Training Events

Mario Milani, MD, Giulia Roveri, MD, Marika Falla, MD, PhD, Tomas Dal Cappello, MSc, Giacomo Strapazzon, MD, PhD



Study objective

We analyzed occupational accidents reported among Corpo Nazionale Soccorso Alpino e Speleologico (CNSAS) providers during mountain search and rescue operations and training events in Italy (1999 to 2019).

Methods

We extracted anonymized data from the CNSAS accident database for all cases of injured mountain search and rescue providers that activated CNSAS insurance (1999 to 2019). We report epidemiological characteristics, mechanisms, type, and severity of injury or illness, clinical outcome, and recovery time.

Results

A total of 784 cases of injuries in CNSAS mountain search and rescue providers were recorded. Forty-one percent of the cases

occurred during rescue operations and 59% during training events. Overall, trauma was the main cause of injury (96%), whereas only 4% of the cases were classified as medical or environmental illnesses. Moderate injury (National Advisory Committee for Aeronautics II to III) occurred in 80% of the reported accidents. Recovery time differed based on the degree of accident severity. Fatalities occurred in 2% of the cases reported and occurred during rescue operations only.

Conclusion

In this long-term retrospective analysis, we showed that accidents occurred among mountain search and rescue providers both during rescue operations and training events. Given the high prevalence and associated costs, it is of pivotal importance to understand the epidemiology and characteristics of occupational injury and illness among this out-of-hospital workforce to better inform future prevention strategies.

How to cite this article

Milani, M, Roveri, G, Falla, M, et al. Occupational Accidents Among Search and Rescue Providers During

Mountain Rescue Operations and Training Events. 2022. <https://doi.org/10.1016/j.annemergmed.2022.12.015>

African Journal of Emergency Medicine

<https://www.afjem.com>

The official journal of the African Federation for Emergency Medicine, the Emergency Medicine Association of Tanzania, the Emergency Medicine Society of South Africa, the Egyptian Society of Emergency Medicine, the Libyan Emergency Medicine Association, the Ethiopian Society of Emergency Medicine Professionals, the Sudanese Emergency Medicine Society, the Society of Emergency Medicine Practitioners of Nigeria and the Rwanda Emergency Care Association

**Assessing awareness and attitude of Egyptian medical students towards emergency medicine as a specialty and career choice: A single-institutional study**

Hussein, M. A., AbdelMawgoud, S. E., Abd El Wahab, M. H., Nagy, M., & El-Shinawi, M. *African Journal of Emergency Medicine*, 13(1), 20-24. <https://doi.org/10.1016/j.afjem.2022.12.003>

Introduction

Emergency medicine (EM) was formally recognized as a specialty in Egypt in 2002. Many institutions of higher education do not yet have an operational academic department of emergency medicine. This study attempts to quantify the awareness and attitude of Ain Shams University medical students towards emergency medicine as both a specialty and a career.

Methods

A paper-based survey was delivered to undergraduate medical students at the Faculty of Medicine, Ain Shams University in Cairo, Egypt between December 2021 and April 2022. The survey was designed to assess awareness towards the scope of practice of emergency physicians as well as general attitude toward emergency medicine as a specialty and career choice.

Results

A total of 391 students and interns/house officers participated in this study. 53.2% of participants were females and

the mean age was 21.65 ± 2.25 years. Only 30 participants (7.7%) were classified as having “Excellent knowledge” of emergency medicine, 92 (23.5%) as “Good knowledge”, 158 “40.4%” as “Fair knowledge” and 111 (28.4%) as “Poor knowledge”. The difference in scores between academic years was not statistically significant ($p = 0.239$). 91.8% of respondents favored the creation of student interest groups in EM and 40% of respondents found it difficult to reach information regarding EM.

Conclusion

Our study demonstrates a lack of awareness and knowledge towards emergency medicine as a specialty across all academic years at our institution. Formal recognition of EM as a specialty doesn’t guarantee widespread knowledge among medical students, particularly at institutions without academic EM departments.

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Emergency Medicine Journal

<https://www.emj.bmj.com>

Official Journal of the Royal College of Emergency Medicine

Evaluating the impact of a pulse oximetry remote monitoring programme on mortality and healthcare utilisation in patients with COVID-19 assessed in emergency departments in England: a retrospective matched cohort study

Thomas Beaney, Jonathan Clarke, Ahmed Alboksmaty, Kelsey Flott, Aidan Fowler, Jonathan Benger, Paul P Aylin, Sarah Elkin, Ara Darzi, Ana Luisa Neves <http://dx.doi.org/10.1136/emermed-2022-212377>



Background

To identify the impact of enrolment onto a national pulse oximetry remote monitoring programme for COVID-19 (COVID-19 Oximetry @home; CO@h) on health service use and mortality in patients attending Emergency Departments (EDs).

Methods

We conducted a retrospective matched cohort study of patients enrolled onto the CO@h pathway from EDs in England. We included all patients with a positive COVID-19 test from 1 October 2020 to 3 May 2021 who attended ED from 3 days before to 10 days after the date of the test. All patients who were admitted or died on the same or following day to the first ED attendance within the time window were excluded. In the primary analysis, participants enrolled onto CO@h were matched using demographic and clinical criteria to participants who were not enrolled. Five outcome measures were examined within 28 days of first ED attendance: (1) Death from any cause; (2) Any subsequent ED attendance; (3) Any emergency hospital admission; (4) Critical care admission; and (5) Length of stay.

Results

15 621 participants were included in the primary analysis, of whom 639 were enrolled onto CO@h and 14 982 were controls. Odds of death were 52% lower in those enrolled (95% CI 7% to 75%) compared with those not enrolled onto CO@h. Odds of any ED attendance or admission were 37% (95% CI 16% to 63%) and 59% (95% CI 32% to 91%) higher, respectively, in those enrolled. Of those admitted, those enrolled had 53% (95% CI 7% to 76%) lower odds of critical care admission. There was no significant impact on length of stay.

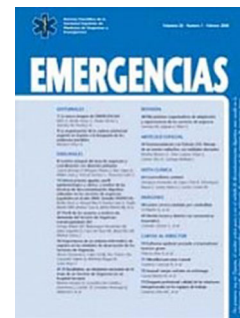
Conclusions

These findings indicate that for patients assessed in ED, pulse oximetry remote monitoring may be a clinically effective and safe model for early detection of hypoxia and escalation. However, possible selection biases might limit the generalisability to other populations.

Emergencias

<https://www.emergencias.portalsemes.org/English>

Official Journal of the Spanish Society of Emergency Medicine



Performance of 3 functional scales for predicting adverse outcomes at 30 days in older patients discharged from emergency departments

Cesáreo Fernández Alonso, Carmen Del Arco Galán, Raquel Torres Garate, José Fernando Madrigal Valdés, Rodolfo Romero Pareja, Carlos Bibiano Guillén, Belén Rodríguez Miranda, Martín S. Ruiz Grinspan, Sonia Gutiérrez Gabriel, Ana Del Rey Ubago, Manuel E. Fuentes Ferrer, Francisco Javier Martín-Sánchez, en representación del Registro Frail-ED-Madrid.

Cited: Fernández Alonso C, Del Arco Galán C, Torres Garate R, Madrigal Valdés JF, Romero Pareja R, Bibiano Guillén C, et al. Performance of 3 functional scales for predicting adverse outcomes at 30 days in older patients discharged from emergency departments. *Emergencias*. In press. DOI: 885.<http://emergencias.portalsemes.org/descargar/rendimiento-de-tres-escalas-de-fragilidad-para-predecir-resultados-adversos-a-30-das-en-los-pacientes-mayores-dados-de-alta-en-los-servicios-de-urgencias/>

Objective

To compare the ability of 3 functional scales (the Clinical Functional Scale [CFS], the Functional Index – eEmergency [FIM], and the Identification of Seniors at Risk [ISAR] scale) to predict adverse outcomes at 30 days in older patients discharged from hospital emergency departments (EDs).

Methods

Secondary analysis of data from the FRAIL-Madrid registry of patients aged 75 years or older who were discharged from Madrid EDs over a period of 3 months in 2018 and 2019. Functional was defined by a CFS score over 4, a FIM score over 2, or an ISAR score over 3. The outcome variables were revisits to an ED, hospitalization, functional decline, death, and a composite variable of finding any of the previously named variables within 30 days of discharge.

Results

A total of 619 patients were studied. The mean (SD) age was 84 (7) years, and 59.1% were women. The CFS identified as frail a total of 339 patients (54.8%), the FIM 386 (62.4%), and the ISAR 301 (48.6%). An adverse outcome occurred within 30 days in 226 patients (36.5%): 21.5% revisited, 12.6% were hospitalized, 18.4% experienced functional decline, and 3.6% died. The areas under the receiver operating characteristic curves were as follows: CFS, 0.66 (95% CI, 0.62-0.70; $P = .022$); FIM, 0.67 (95% CI, 0.62-0.71; $P = .021$), and ISAR, 0.64 (95% CI, 0.60-0.69; $P = .023$). Adjusted odds ratios (aOR) showed that frailty was an independent risk factor for presenting any of the named adverse outcomes: aOR for CFS > 4, 3.18 (95% CI, 2.02-5.01), $P < .001$; aOR for FIM > 2, 3.49 (95% CI, 2.15-5.66), $P < .001$; and aOR for ISAR > 3, 2.46 (95% CI, 1.60-3.79), $P < .001$.

Conclusions

All 3 scales studied—the CFS, the FIM and the ISAR—are useful for identifying frail older patients at high risk of developing an adverse outcome (death, functional decline, hospitalization, or revisiting the ED) within 30 days after discharge.

Keywords

Emergency department. Functional Index - eEmergency (FIM). Clinical Functional Scale (CFS). Identification of Seniors at Risk (ISAR). Prediction. Adverse outcomes.

Hong Kong Journal of Emergency Medicine

<https://www.hkjem.com>

Official Journal of the Hong Kong College of Emergency Medicine

Comparison of fibre-optic-guided endotracheal intubation through a supraglottic airway device versus hyperangulated video laryngoscopy by emergency physicians: A randomised controlled study in cadavers

Groombridge CJ, Maini A, Mathew J, Fritz P, Kim Y, Fitzgerald M, Smit DV, O'Reilly G. <https://doi.org/10.1177/10249079211034272>



Background

After failed endotracheal intubation, using direct laryngoscopy, rescued using a supraglottic airway device, the choice of subsequent method to secure a definitive airway is not clearly determined.

Objective

The aim of this study was to compare the time to intubation using a fibre-optic airway scope, to guide an endotracheal tube through the supraglottic airway device, with a more conventional approach using a hyperangulated video laryngoscope.

Methods

A single-centre randomised controlled trial was undertaken. The population studied were emergency physicians working in an adult major trauma centre. The intervention was intubation through a supraglottic airway device guided by a fibre-optic airway scope. The comparison was intubation using a hyperangulated video laryngoscope. The primary outcome was time to intubation. The trial was registered with ANZCTR.org.au (ACTRN12621000018819).

Results

Four emergency physicians completed intubations using both of the two airway devices on four cadavers for a total of 32 experiments. The mean time to intubation was 14.0 s (95% confidence interval = 11.1–16.8) in the hyperangulated video laryngoscope group compared with 29.2 s (95% confidence interval = 20.7–37.7) in the fibre-optic airway scope group; a difference of 15.2 s (95% confidence interval = 8.7–21.7, $p < 0.001$). All intubations were completed within 2 min, and there were no equipment failures or evidence of airway trauma.

Conclusion

Successful intubation of the trachea without airway trauma by emergency physicians in cadavers is achievable by either fibre-optic airway scope via a supraglottic airway device or hyperangulated video laryngoscope. Hyperangulated video laryngoscope was statistically but arguably not clinically significantly faster than fibre-optic airway scope via supraglottic airway device.