

**Editor's note:** *Annals* has partnered with a small group of selected journals of international emergency medicine societies to share from each a highlighted research study, as selected monthly by their editors. Our goals are to increase awareness of our readership to research developments in the international emergency medicine literature, promote collaboration among the selected international emergency medicine journals, and support the improvement of emergency medicine world-wide, as described in the WAME statement at <http://www.wame.org/about/policy-statements#Promoting%20Global%20Health>. Abstracts are reproduced as published in the respective participating journals, and are not peer reviewed or edited by *Annals*.

## African Journal of Emergency Medicine

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*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*

### A cross-sectional survey of burnout amongst doctors in a cohort of public sector emergency centres in Gauteng, South Africa

Rajan S, Engelbrecht A. A cross-sectional survey of burnout amongst doctors in a cohort of public sector emergency centres in Gauteng, South Africa. *Afr J Emerg Med*. 2018;8:95-99.

**Introduction:** Working in emergency care is commonly regarded as highly stressful. This is also true in the African setting characterised by high patient loads and limited resources. As in other similarly demanding occupations, burnout can be anticipated. The aim of this study was to examine the level of burnout amongst doctors in a cohort of public sector emergency centres in Gauteng, South Africa.

**Methods:** An observational, cross-sectional design was employed, using the Maslach Burnout Inventory-Human Services Survey (which has been tested and validated in similar settings elsewhere). The study included a cohort of doctors working in the emergency centres of public sector hospitals in Gauteng, South Africa.

**Results:** One hundred participants completed the questionnaire out of a possible 124 doctors working at the five centres. Ninety-three met the inclusion criteria and was further analysed. Seven respondents were specialist emergency physicians (7.5%), 36 were emergency medicine registrars (38.7%) and 50 were medical officers (53.8%). Fifty one respondents were female (55.0%). Analysis of

burnout component scores showed a mean emotional exhaustion score of 31.69 (standard deviation, SD = 10.32), with 62 respondents (66.7%) in the high-risk group – from 86 (92.5%) at moderate to high risk. The mean depersonalisation score was 13.39 (SD = 6.21), with 50 respondents (53.8%) in the high-risk group – from 75 (80.7%) at moderate to high risk of burnout. The mean personal accomplishment score was 34.87 (SD = 6.54), with 21 respondents (22.6%) in the high-risk group – from 65 (69.9%) at moderate to high risk of burnout.

**Discussion:** The results indicate that a large proportion of the doctors who work in these emergency centres are at moderate to high risk of burnout. Based on our findings we recommend that interventions be introduced at the work place to reduce burnout in doctors and improve their mental well-being. This will ensure better service delivery to patients with emergencies. Further research into the causes of occupational burnout should be explored.

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## Canadian Journal of Emergency Medicine

[caep.ca/resources/cjem](http://caep.ca/resources/cjem)

*Official Journal of the Canadian Association of Emergency Physicians*

### Risk factors associated with acute in-hospital delirium for patients diagnosed with a hip fracture in the emergency department

Thompson C, Brienza VJM, Sandre A, Caine S, Borgundvaag B, McLeod S. Risk factors associated with acute in-hospital delirium for patients diagnosed with a hip fracture in the emergency department. CJEM. 2018;20:911-919.

**Objectives:** The primary objective was to identify risk factors independently associated with acute in-hospital delirium within 72 hours of emergency department (ED) arrival for patients diagnosed with a hip fracture.

**Methods:** This was a retrospective chart review of patients ages 65 years and older presenting to one of two academic EDs with a discharge diagnosis of a hip fracture from January 1, 2014, to December 31, 2015. A multivariable logistic regression analysis was used to determine variables independently associated with the development of acute in-hospital delirium within 72 hours of ED arrival.

**Results:** Of the 668 included patients, 181 (27.1%) developed delirium within 72 hours of ED arrival. History of neurodegenerative disease or dementia (odds ratio [OR]: 5.7, 95% confidence interval [CI]: 3.9, 8.4), age > 75 (OR: 2.8, 95% CI: 1.4,

5.6), and absence of analgesia (no opioid or nerve block) in the ED (OR: 2.1, 95% CI: 1.3, 3.2) were independently associated with the development of acute in-hospital delirium; 525 (78.6%) patients received opioid analgesia in the ED. The most common analgesics used in the ED were intravenous (IV) morphine (35.8%), IV hydromorphone (35.2%), or dual therapy with both IV hydromorphone and IV morphine (2.2%). Femoral nerve blocks were initiated for 36 (5.4%) patients and successfully completed in 35 (5.2%) patients in the ED.

**Conclusions:** Advanced age and signs of dementia or neurodegenerative disease are predictors of 72-hour delirium that can be screened for during triage. Improved pain control in the ED may reduce the risk of acute in-hospital delirium.

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## Emergencias

[emergencias.portalsemes.org/english](http://emergencias.portalsemes.org/english)

*Official Journal of the Spanish Society of Emergency Medicine*

### Emergencias related to recreational drug abuse in Spain compared to emergencies attended in 3 European areas

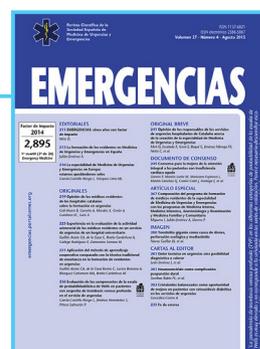
Miró O, Yates C, Dines AM, Wood DM, Dargan PI, Galán I, et al. Emergencias related to recreational drug abuse in Spain compared to emergencies attended in 3 European areas. Emergencias. 2018;30:385-394.

**Objectives:** To analyze epidemiologic, clinical, and care characteristics in cases in which patients came to 2 Spanish emergency departments (EDs) with symptoms caused by recreational drug abuse. To compare the characteristics with those reported for other areas of Europe.

**Methods:** Secondary analysis of the registry of the European Drug Emergencies Network (Euro-DEN Plus), which collects cases in 14 European countries and 20 EDs. The registry included all patients attending EDs with symptoms of recreational drug abuse (excepting cases involving alcohol alone) over a period of 39 consecutive months (October 2013 to December 2016). We compared the cases from the 2 Spanish EDs (in Barcelona and Palma de Mallorca) to those from the 5 EDs in Ireland and the UK, 6 in northern Europe, and 7 in central Europe.

**Results:** A total of 17 104 patients' cases were included: Spain, 1186; UK and Ireland, 6653; northern Europe, 6097; and

central Europe, 3168. Spain saw more emergencies related to cocaine (48.4%) and fewer related to opioids (12.4%) than the other areas. The Spanish patients were younger (32.2 years) on average than those in northern Europe and older than those in the UK and Ireland and central Europe. Fewer patients were women in Spain (21.9%) than in northern or central Europe. Fewer arrived in ambulances in Spain (70.0%) than in the UK and Ireland or northern Europe. The Spanish EDs recorded the temperature and respiratory frequency of fewer patients (29.8% and 30.3%, respectively). Clinical signs differed between geographical areas attributable to differences in drug-use patterns. In Spain, naloxone was used by fewer patients (9.6%) than in the UK and Ireland and northern Europe, and flumazenil was used by more patients (5.6%) than in other areas. Spain saw lower percentages of admissions (4.6%) and patients who left without an ED discharge (6.2%) in comparison with other areas. Mortality rates in the Spanish EDs (0.4%) and after discharge from them (0.7%) were higher than in northern Europe.



**Conclusions:** The characteristics of emergencies related to recreational drug abuse registered by the Spanish EDs were differed from those registered in other parts of Europe due to different patterns of drug use. We also detected differences between the Spanish and other European EDs with respect to examinations or tests performed, treatment given, and discharge disposition.

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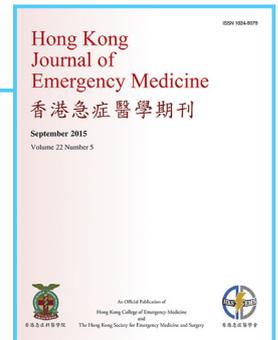
## Hong Kong Journal of Emergency Medicine

[hkjem.com](http://hkjem.com)

*Official Journal of the Hong Kong College of Emergency Medicine*

### The significance of National Early Warning Score for predicting prognosis and evaluating conditions of patients in resuscitation room

Yuan WC, Tao C, Dan ZD, Yi SC, Jing W, Jian Q. The significance of National Early Warning Score for predicting prognosis and evaluating conditions of patients in resuscitation room. *HKJEM*. 2018;25:324-330.



**Background:** For critical patients in resuscitation room, the early prediction of potential risk and rapid evaluation of disease progression would help physicians with timely treatment, leading to improved outcome. In this study, it focused on the application of National Early Warning Score on predicting prognosis and conditions of patients in resuscitation room. The National Early Warning Score was compared with the Modified Early Warning Score) and the Acute Physiology and Chronic Health Evaluation II.

**Objectives:** To assess the significance of NEWS for predicting prognosis and evaluating conditions of patients in resuscitation rooms.

**Methods:** A total of 621 consecutive cases from resuscitation room of Xuanwu Hospital, Capital Medical University were included during June 2015 to January 2016. All cases were prospectively evaluated with Modified Early Warning Score, National Early Warning Score, and Acute Physiology and Chronic Health Evaluation II and then followed up for 28 days. For the prognosis prediction, the cases were divided into death group and survival group. The Modified Early Warning Score, National Early Warning Score, and Acute Physiology and Chronic Health Evaluation II results of the two groups were compared. In addition, receiver operating characteristic curves were plotted. The areas under the receiver operating characteristic curves were calculated for

assessing and predicting intensive care unit admission and 28-day mortality.

**Results:** For the prognosis prediction, in death group, the National Early Warning Score ( $9.50 \pm 3.08$ ), Modified Early Warning Score ( $4.87 \pm 2.49$ ), and Acute Physiology and Chronic Health Evaluation II score ( $23.29 \pm 5.31$ ) were significantly higher than National Early Warning Score ( $5.29 \pm 3.13$ ), Modified Early Warning Score ( $3.02 \pm 1.93$ ), and Acute Physiology and Chronic Health Evaluation II score ( $13.22 \pm 6.39$ ) in survival group ( $p < 0.01$ ). For the disease progression evaluation, the areas under the receiver operating characteristic curves of National Early Warning Score, Modified Early Warning Score, and Acute Physiology and Chronic Health Evaluation II were 0.760, 0.729, and 0.817 ( $p < 0.05$ ), respectively, for predicting intensive care unit admission; they were 0.827, 0.723, and 0.883, respectively, for predicting 28-day mortality. The comparison of the three systems was significant ( $p < 0.05$ ).

**Conclusion:** The performance of National Early Warning Score for predicting intensive care unit admission and 28-day mortality was inferior than Acute Physiology and Chronic Health Evaluation II but superior than Modified Early Warning Score. It was able to rapidly predict prognosis and evaluate disease progression of critical patients in resuscitation room.

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