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Introduction: Road tunnel systems are becoming increasingly complex. Regardless of incident, the confined nature of the road tunnel impairs responding emergency services accessibility, with a risk for delay in treatment of time-sensitive injuries such as pneumothorax or internal hemorrhage. Consequently, the need for rapid decision-making by the emergency services commanders is increased. However, in Sweden ambulance commanders lack experience and training in managing road tunnel incidents. This may further delay the medical response.

The aim is to investigate if the ambulance commander decision-making in simulated road tunnel incidents may be improved by a specific road tunnel incident e-learning course. **Method:** A web-based intervention study was performed with 20 participants; 10 participants in the intervention and control group, respectively. The control group received a pre-recorded general lecture on incident management. The intervention group received a specific road tunnel incident e-learning course, consisting of five interactive modules with learning materials (e.g. road tunnel structures, collaboration and safety). All participants participated in web-based simulations of major road tunnel incidents at one and six months post-intervention. In these simulations, participants acted as ambulance commanders and decided on the best course of action in 15 dissimilar and multiple choice-based management decisions. For each decision, time and choice of decision were recorded as outcome measurements.

Results: Preliminary analysis from the one-month follow up simulation indicates that none of the participants decided to enter the road tunnel system at the early stage of the incident. The motivation for the participants decision-making was not clear.

Conclusion: The cautiousness to enter the road tunnel system will impair the emergency medical services response, including delaying vital medical care. Further research into the reasoning behind this decision is needed and identified causes may be further addressed in updated educational materials and collaborative discussions.

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Disaster Training—How Much Educational Impact Does it Really Have?

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Introduction: In Singapore, disaster training and preparation are taken seriously. Many exercises and training sessions have been planned and run yearly with the hope of being able to respond effectively to an emergent disaster. This presentation aims to evaluate the effectiveness of our training programs to determine if the learner participants are equipped to manage disasters when they happen based on their learning objectives.

Method: The disaster training programs that Singapore General Hospital participates in, both nationally and internally, were analyzed based on Bloom's taxonomy for educational objectives. At the lowest level, the learner demonstrates the ability to remember the facts that he learned, followed by understanding the concepts, applying the information, analyzing the learning undertaken, evaluating his performance, and creating new methods to learn or train to improve his performance.

Results: Based on the analysis of the various exercises and training sessions, most learning objectives are pegged to the remembering to application levels (90%) while very few participants, especially the instructors and evaluators (<10%) may achieve learning objectives of being able to analyze and evaluate the training sessions. As disaster training involves multiple inter-professional teams there is also a risk of rapidly diminishing retention of knowledge and skills over time because of the high turnover of manpower especially from residents and medical officers who are attached to the departments for a few months.

Conclusion: There is room for more targeted disaster training aimed at more participants and with learning objectives determined at the higher level of Bloom's taxonomy, at least to achieve the ability to analyze and evaluate one's performance for improvement. Creating opportunities for more participants to be able to do that would be a challenge.

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Lodgers, Boarders, Trolley Patients; A Growing Challenge in Emergency Departments (ED). Zero Tolerance for Trolleys or Zero Tolerance for Zero Trolleys; A Crude Examination of Progressive Capacity Issues in an Irish Emergency Department.

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Introduction: The Health Information and Quality Authority (HIQA) Tallaght Report of 2012 found care of lodged admitted patients on ED trolleys was undermined in terms of quality and safety. HIQA advised the practice of lodging in ED adjacent hospital corridors should be discontinued entirely. This message was reiterated during the pandemic. Some lodged patients may spend the total duration of their admission on an ED trolley. ED has 15 Adult rooms, seven pediatric rooms, two minor injury rooms, one procedure room and two resus bays. The aim was to calculate the annual number of days when no admitted patients were lodged on trolleys in ED.

Method: A descriptive study using data available from nationally issued reports on patients allocated to trolleys to the ED of Wexford General Hospital from January 2019–September

2022. Data was collected from national HSE daily SBAR reports. "Lodged patients" were those present in ED admitted but for whom no ward bed existed at 0745 daily.

Results: Data was collected for 1,369 days, 90 days were excluded due to missing data sets, and data were included for 1,279 days. 290 days were recorded in 2019 with no lodged patients, 126 in 2020, 55 in 2021, and only 11 days in 2022 with no lodged patients. In 2022 the average number of lodged patients was six (Range 0–19). A total of 47 days had a lodged count of ten or greater.

Conclusion: Despite a strong recommendation from HIQA to terminate the practice of ED patient lodging, this has not been implemented. During the COVID-19 pandemic, there had been a reduction in the overall number of patients visiting the ED. This contributed to the reduction in trolley-lodged patients however post-COVID pandemic there has been a surge in attendance with a clear deficit in bed capacity.

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Retrospective Analysis to Assess the Admission Rate Trends in an Irish Public Hospital between February 2014–September 2022

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Introduction: As the population in the Republic of Ireland increases, the number of Emergency Department (ED) attendances and admission rates increase, placing significant pressure on the health care system, the limited staff and hospital resources.

The aim of this study is to assess the admission rates in an Irish Public Hospital Emergency Department between 2014 and 2022.

Method: This retrospective study was done using information provided by the Health Service Executive Integrated Patient Management System. Data for the period between February 2014 to September 2022 were collected. From the data, the admission rate can be calculated and trends observed.

Results: Emergency department attendance rates have increased from 29,236 to 42,637 between 2014 and 2019, with a decline noticed in 2020 to 37,751 and a drastic increase in 2021 at 43,182. Currently up until September 2022 there has been 35,503 attendances and 8,570 admissions, with an admission rate of 24.14%. The number of admissions has ranged from 9,056 in 2014 to the highest being 12,175 in 2019. This means the admission rate is averaging between 24% to 31% per annum, with the highest being 31,04% in 2015, and the lowest in 2017 at 24,99%.

Conclusion: This study showed a steady increase in attendances per annum, which correlates to an increase in the total

admissions from 2014 to 2022, with approximately one third of all ED attendances resulting in admission. The increase in attendances and admission rate could be related to the population growth from 4.6 to 5.1 million from 2014 to 2022. The decrease in attendances during 2020 could be attributed to the Covid-19 pandemic restrictions being implemented, and lifted in 2021 which showed a drastic increase in ED numbers. Ultimately, the increase in admissions will place a burden on the Public Hospitals in Ireland.

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Retrospective Analysis of Patient Presentations at Belgium's Largest Multi-day Outdoor Hardstyle Dance Event

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Introduction: Electronic dance music festivals (EDMF) are a unique subset of music mass gatherings. Besides the already more significant burden on in-event health services (IEHS) that comes with these festivals, EDMF are also known for their illicit drug use, with their attendees at high risk for illegal drug use.

Method: Encounter data from all patients seen and treated by IEHS at an annual outdoor multi-day EDMF (focused on hardstyle dance music) in August 2019 were analyzed. Based on the chief complaint, and medical and nursing notes, a list was consolidated into 31 reasons for the consultation of IEHS. The most common reasons for consulting IEHS were analyzed.

Results: This outdoor hardstyle dance event had 30,000 attendees, of which 580 visited IEHS. This resulted in a patient presentation rate of 19.3/1,000 attendees. Four were transported to the hospital (transport to hospital rate: 0.13/1,000 attendees). The most prevalent reason to consult IEHS were lacerations and abrasions (9.66%), sprains (9.48%), and headaches (7.59%). Only 4.83% of all patients (n = 12) presented with adverse effects of illicit drug use. Of interest is that twelve patients with intoxications (42.86% of all intoxicated patients) were initially triaged as life-threatening, mainly due to obstructed airways. Only one of these twelve needed endotracheal intubation and was transported to the hospital. All other intoxicated patients returned to the event. No direct relationship between gender and the chief complaint was found.

Conclusion: Besides typical patient presentations, illicit drug use with its adverse effects can seriously impact IEHS. These results confirm the need for highly trained (Advanced life support level) IEHS at EDMF. Competent IEHS can mitigate the burden of these events on regular EMS.

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