own resources. In disaster areas such as this, there should be services for those who have suffered, and also extra services for the special risk groups to prevent exploitation.

Keywords: earthquake; Indonesia; rescue; tsunami; Turkey
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(255) Evaluation of the Preparedness for Chemical Incidents Caused by the Derailment of a Freight Train Carrying Chlorine

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Introduction: In February 2005, a freight train derailed near Kungsbacka, Sweden. The train consisted of 12 tank cars, each of which carried 65 tons of chlorine. The derailment occurred because the freight train went onto a blind track to await a meeting train. Attempts to stop the train failed, and the engine and four of the cars derailed into the surrounding field. Fortunately none of the tanks were disrupted. However, the event raised questions regarding the consequences of the accident if a chlorine leak had occurred.
Methods: An evaluation of the preparedness of the emergency services' response to chemical accidents was conducted. Simulations based on mathematical models were conducted to determine the dispersal rate of chlorine given the weather conditions during the event. The potential impact on the population in the area surrounding the site of derailment was calculated using population data provided by the local authorities in Kungsbacka.
Results: The simulations showed that release of chlorine after the incident would have resulted in severe consequences for the people in the dissemination area. None of the emergency services involved possessed adequate preparedness to manage the scenario.
Conclusions: It is important to realize that the extent of the dissemination area is not limited to the geographic area where the accident occurred. Casualties may be scattered throughout a wide area, both inside and outside of buildings. It is recommended that casualties are evacuated before decontamination, particularly during incidents involving industrial chemicals.

Keywords: chemicals; derailment; dissemination; preparedness; simulation
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(256) Lessons Learned from Greek Myths

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Standard categorizing of disasters into "god-made" and "human-made" should be revised. In some myths, such as Damocles's sword, Pandora's box, and Medusa's head, there are includedmethods for dealing with disasters. Concepts of trust and confidence on the one hand, and a certain culture of risk on the other, point to an acceptance of nature as uncertain and unstable. Can we learn the solution to disasters by listening to Greek ancient myths? Because inside the myths, truth is living.

Keywords: categorization; coping; disaster; Greek mythology
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(257) The "Helios" Aircraft Crash in Athens

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The aim of this report is to study the mobilization and problems faced by the agencies that managed the "Helios" aircraft crash in Grammatiko, Greece, on 14 August 2005. The incident involved the "Helios" flight ZU522 from Larnaca, Cyprus via Athens, Greece to Prague, Czech Republic on a Boeing 737-31S with 116 passengers and a five-person crew. The aircraft took off from Larnaca at 06:07 hours (h) UTC and crashed near Grammatiko at 09:03 h UTC.

The "El Venizelos", Athens International Airport (EV-AIA, called a "full emergency status" at 08:50 h UTC. At the same time the Hellenic National System for Emergency Medical Care, EKAB, was alarmed and immediately placed two mobile intensive care units (MICUs)and three B-ambulances at the disposal of the EV-AIA. At 08:55 h, the alarm was escalated to face an "uncontrolled" approach and landing. At 09:03 h, EV-AIA and EKAB were notified about the airliner crash about 12 nm north of EV-AIA. The full-scale alarm status in EKAB included the dispatch of 9 MICUs, 11 other physician-equipped vehicles, 25 B-ambulances, and one medevac helicopter.

The problems faced at the disaster site in order of importance were: (1) horizontal dispatch of information; (2) coordination between agencies; (3) chain of command; (4) inadequate and difficult access to the disaster site; and (5) staging of responding vehicles. The major problem outside of the site was the deficiency of ambulance vehicles in Athens for about four hours. Nevertheless, at no time was the health or safety personnel jeopardized—singly or collectively.

This incident identified response deficiencies to such an event and also generated ways to improve the responses.

Keywords: aircraft crash; deficiencies; Greece; opportunity costs; responses; safety
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(258) Hospital Fires: Gazi University Case

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Gazi University Hospital is a 950-bed, university hospital situated in central Ankara, Turkey. A fire started on 28 June, around 11:00 hours (h). Nurses on the 12th floor of the hospital notified the Emergency Management Department of the presence of smoke in a ventilation hall. Initial response was provided by the security personnel in the hospital and the small fire caused by burning garments and a small amount of garbage thrown out of a window at 7th floor was contained. However, about 15 minutes later, a fire alarm was given due to the presence of heavy smoke coming from the main electrical control room in the basement. Emergency response units (fire department and EMS) were notified and the evacuation of the tower that was affected by the fire was ordered. Around 250 patients

in that particular tower were evacuated within 10 minutes. Non-ambulatory patients were evacuated mainly horizontally to the unaffected tower connected through the hallways. Fire was contained by the fire department. No deaths or injuries were reported related to the incident. A total of 34 patients with potentially critical condition were transported to other hospitals in the area by the EMS.

Fires are one of the most common events encountered by hospitals worldwide. Emergency management planning, staff training, and regular drills are required for better responses to these events. Preplanned evacuation actions should be taught to the personnel. Horizontal evacuation of non-ambulatory patients can be an effective method during the initial response.

Keywords: evacuation; fire; hospital; training
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(259) Disaster Potentials and a New Classification

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As known, life has three dimensions—macro-, micro-, and normo-features. Energy released by events occurring within these dimensions has the power to terminate human life. All potentials, both known and unknown, contain the potential power of creating crises for human beings. Meteor rains, collisions of planets, satellite crashes, or satellite accidents that could occur during their landing are the disaster potentials of "Macro Life". "Micro Life" is a dimension that cannot be seen through the eyes, but can be explained with the means of modern medicine. Throughout history, these potentials caused disasters which ended in multiple deaths. Plague, tularemia, AIDS, and SARS are among the most important micro-life potentials, and their agents are known. The third dimension is "Normo Life" in which our normal life is shaped. Potentials here should be classified as "Natural Disaster Potentials (NDP)" and "Man-Made Disaster Potentials (MMDP)". Terrorism, NBC attacks and accidents, fires, transportation accidents, wars, environmental pollution, migration, and technological accidents can be listed among the most common man made DP. Another classification among natural DP which is "Lithosphere", "Atmosphere" and "Hydrosphere" oriented potentials, can help us understand the overall potentials. Earthquakes, landslides, and volcanic eruptions are the potentials of lithosphere. Floods and inundation are the common examples for the disaster potentials of hydrosphere, and meteorological events such as cyclones, storm, hurricanes, and tornados are the disaster potentials of atmosphere. Droughts, poverty, and tsunamis, can be listed among "mixed" disaster potentials which cover all these spherical layers.

Keywords: classification; crises' disaster potentials; dimensions; events
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(260) Shipping Disasters in the Channel: A Need for International, Multidisciplinary Rescues

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On 06 March 1987 the ferry Herald of Free Enterprise (HOFE) capsized outside the harbour of Zeebrugge. A large rescue operation was implemented. Boats were directed towards an empty pontoon. At the pontoon, emergency care was provided and further transport was organized to convey victims to surrounding hospitals. 21 medical teams received more than 250 victims within hours of the event. The majority of casualties were due to immersion. One-third of the victims died, one-third was hospitalized, and the remaining victims were transported to emergency shelters.

The Mont Louis, a French Roro Ship, collided with the car ferry, Olau Brittannia, on 25 August 1984 off the Belgian coast. The Mont Louis carried 30 cylinders with 15 ton of UF6 low radioactivity.

On 14 December 2002, the Tricolor, a cargo transporting 3,000 cars, with "shoebox" construction similar to the ferry HOFE, sunk after a collision a few miles out of Zeebrugge. Despite all kinds of warning systems, 10 near collisions and two real collisions occurred within two weeks after this event

The high density of maritime traffic in the Channel (20% of the world maritime traffic) requires for disaster planning with cross-border responses. The IMO has begun efforts to improve the safety of traffic on the sea. Human failure still is possible.

Keywords: accidents; international; maritime; rescue; safety; traffic
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(261) Mass Carbon Monoxide Intoxication at Two Ice Hockey Games: Initial Approach and Long-term Follow-Up

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Introduction: A group of people became ill during a Premier League ice hockey game due to a carbon monoxide intoxication caused by the exhaust of an ice maintenance machine. Due to this intoxication, a total of 235 patients were seen at area hospitals. Twenty months after this event, another mass intoxication occurred during an ice hockey game. Forty-three patients presented to the index hospital at that time. To the knowledge of the authors, these are the first reported ice hockey-related mass intoxications in Belgium.

Methods: Apart from the file data of the different emergency departments, a follow-up mailing was sent to all patients one year after the mass intoxication events to evaluate delayed complaints and clinical controls.

Results: There was a response rate of 67.7%. The mean value for the carboxyhemoglobin concentrations (COHb) was 10.2% (max = 30.2%). There was a significant relationship with the presence of headaches ($p = 0.006$), dizziness ($p = 0.000$), and fatigue ($p = 0.000$) and the COHb level. Abdominal pain, nausea, and vomiting were not significantly related. Of the respondents, 6.3% had residual complaints (headaches) with a significantly higher incidence ($p = 0.000$) with high COHb levels. Only 1.3% had an abnormal neurological control. Work incapacity was not significantly related to the COHb levels.