specialists. Theoretical training made progression in means and percentage good answers (post-test 1 vs. pré-test : 9.5±3.3 vs 6.9 ±2 ; p=0.008 et 22 vs. 10% ; p=0,001 respectively). Progression of means after simulation was noticed (2nd session vs. 1st session) (16.3±0.9 vs. 12.3±2.5 ; p<0.001). Simulation enhanced significant quality of handover. Means and percentage of good answers in tests was better after simulation sessions (post-test 2 vs. post-test 1 vs. pre-test : 10.7±2.8 vs. 9.5±3.3 vs. 6.9±2 ; p=0.01 et 29% vs. 22% vs. 10% ; p<0.001 respectively).

Conclusion: Our study showed the utility of simulation in enhancing handover between pre-hospital and intra-hospital physicians. Simulation as an active learning method, combined with theoretical training, can improve knowledge and enhance skills.

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Preparing Hospitals for CBRN Emergencies in Israel–A Review

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Introduction: The mission of the medical department in the Home Front Command is to support the preparedness of Israel's health system for emergencies, both in day-to-day routine and during wartime. This is achieved by practicing emergency scenarios in all general hospitals, including biological, chemical, and radiological mass-casualty events.

Method: Implementing an annual drill plan in all general hospitals and practicing emergency scenarios, including non-conventional events such as mass toxicological events and radiological mass casualty events.

Results: The presentation describes the hospital radiological and chemical mass casualty event doctrine and the drills performed in hospitals to achieve better preparedness.

Conclusion: The drills conducted in the general hospitals in Israel enable better preparation for CBRN emergency scenarios.

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Identifying Core Competencies for Medical Command and Control Teams Managing Covid-19

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Introduction: The Covid-19 pandemic strained most of the world's health care organizations to, and sometimes beyond, their limits. To anticipate, coordinate, mobilize, and prioritize hospital resources, Sweden's health care regions established regional medical command and control teams according to the medical major incident structure. This command structure was initially developed based on an all-hazards approach focused primarily on sudden mass casualty incidents with a relatively short time frame. Covid-19 management was active for several months with a most intense operations period during the spring of 2020. This study aimed at identifying competence needs by employing a co-creative approach with members of the staff involved in the pandemic management.

Method: Data was collected and analyzed using a modified Delphi consensus method. The respondents were subject matter experts serving in the regional medical command and control teams during the COVID-19 pandemic. One workshop was held to gather opinions, which were included as statements in a consensus survey and answered by the participants after the first workshop. A second workshop was held to discuss statements that did not reach initial consensus in the survey and establish final consensus.

Results: The consensus agreed statements were sorted into five themes, which constituted the collective agreement of medical command and control core abilities. The five core competence themes were: Situation report, Team organization, Co-operation, Competence management, and Analysis. The consensus agreed statements highlighted competencies needed for creating situation reports, organizing medical command and control teams, effective cross-organization co-operation, decision-making, and medical intelligence analysis.

Conclusion: The core competencies of medical command and control identified in the present study can be used to further affirm current learning objectives and to formulate future learning objectives for education and exercises. The evaluation approach could potentially be used as a post-incident review to fine-tune an organization's training plan.

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Improving Hospital Preparedness for Pediatric Abductions

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Introduction: In the United States, 840,000 children are reported missing annually. While no concise data is available on the incidence from healthcare facilities, infant and child abductions and elopement events pose a high risk to infants and hospital staff. Following an update on the missing child and missing infant policy at a tertiary care hospital in New York, the hospital's emergency preparedness team conducted a full-scale hospital drill. The drill included input and participation from administration, nursing, hospital police, and the pediatric department.

Method: New updates in the policy which had not been tested before were evaluated during this drill, including plain language verbiage to activate a code, the process of alerting hospital police of the missing pediatric patient, hospital police response, and the response of hospital staff in their work areas. Inpatient pediatric wards, the emergency department, and outpatient clinics were given teaching about the new policy and their responsibilities in the event of a missing child or infant. Evaluators were

pre-selected and placed throughout the hospital. Afterward, controllers de-briefed with each of the evaluators as well as with hospital personnel in areas that did not receive teaching on the policy.
Results: The areas that did not receive in-person training on the policy update wanted to assist but did not know how to respond and did not follow protocol for securing their areas. Furthermore, areas of the hospital were identified where the overhead paging system did not work as well as gaps in hospital police staffing to cover key hospital exit points.
Conclusion: This drill revealed that all hospital personnel need dedicated and personalized training on policy updates highlighting their roles in response, communication lines need to be tested, and plans to address concurrent clinical emergencies need to be formulated.

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Fire in the Hole: Modeling the Thermal Effects of a Nuclear Detonation in an Urban Environment

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Introduction: In general, models for thermal effects of nuclear weapons are not as well developed as models for blast and radiation effects, yet casualties resulting from fires and burns in a nuclear detonation would significantly impact civil defense and emergency healthcare. Previous studies have conducted in-depth analysis of the various atmospheric conditions that affect the thermal radiation transmissivity. However, such models have yet to consider the role that buildings play in the urban environment to estimate the casualties from the thermal effect more accurately.
Method: A three-dimensional model of the area within a three-mile radius of the detonation site in Atlanta, Georgia, USA was created in Blender. To represent the thermal energy resulting from a 15 kiloton, near-surface burst, a point light was created with a power of 96,725 gigawatts and a radius of 81 meters. Using the Cycles render engine, the resulting light/shadow was orthographically captured directly above the scene.
Results: The rendered model demonstrated the attenuating effects of the built, urban environment. Nearly half (46.82%) of the pixels in the resulting raster were black, or regions that were not exposed to any thermal energy. Slightly less than a quarter (22.32%) of the pixels were white or light gray, or regions that received mostly direct thermal energy. The remaining regions (30.86% of the pixels) were dark gray, or regions that were initially in shadow from the thermal pulse but received thermal energy via reflection from nearby buildings.
Conclusion: As the thermal pulse travels at the speed of light, it arrives at a location before the blast wave. As such, the built urban environment offers protection from the thermal energy released during a nuclear detonation. Future studies that incorporate this thermal model may more accurately determine the quantity and geospatial distribution of burn casualties in the aftermath of a nuclear detonation.

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Hazmat and Hate: Planning and Response for Special Operations Teams to a Neo-Nazi Public Demonstration

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Introduction: October 18, 2017 an unfortunately popular white supremacist brought hate and thousands of protesters to the University of Florida in Gainesville, FL just months after the violent domestic terrorist attacks in Charlottesville, VA. The threats, violent possibilities, and intense planning undertaken by law enforcement and fire-rescue were hugely successful.
Method: Multi-faceted planning from law enforcement, to crowd control, to medical emergency response, to fire suppression, to hazardous material detection and response, to rescue task forces, to extreme sides to protesting... all proved hugely successful.
Results: While there was still violence, complex plans of violence among protests were successfully thwarted.
Conclusion: The coordination between Gainesville Fire Rescue, Gainesville Police Department, Alachua County Sheriff's Office, Florida Highway Patrol, the University of Florida and more was hugely successful and something to be proud of despite such hatred and violence projected while also protecting the first amendment.

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