

disaster resilience and can be utilized in educational and training settings for medical command and control.

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Integrating Response Plans for Burn Mass Casualty Incidents

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Introduction: Across the United States (US), there are approximately 2,000 burn beds in 133 burn centers, only 72 of which are verified by the American Burn Association (ABA). As such, many areas in the US are hundreds of miles from the closest burn center. Eight states do not have a burn center, and another 11 do not have an ABA-verified center. Further, the average center has 15 beds, and, on average, there are 90 available beds across the US. Therefore, in addition to patient care complexities, the broader infrastructure for burn patients is severely limited. These constraints suggest the burn healthcare system is particularly vulnerable to disasters, where the needs will exceed the resources available.

Method: A literature review was conducted of available burn mass casualty incident (BMCI) plans from stakeholders in each level of a response. These response partners included prehospital agencies, hospitals (those with and without trauma center designations), emergency management agencies (local, state, and federal), healthcare coalitions, public health (district, state, and federal), regional coordinating burn centers, and the ABA.

Results: The amalgamation of the BMCI plans yields a tripartite infrastructure not unfamiliar to emergency management professionals. The burn care agencies integrate into a response, similar to the way in which public health integrates into the emergency management infrastructure. The local to state to federal escalation of assets is reflected by an escalation from the local burn center to the regional coordinating burn center to the ABA. However, gaps remain in the communication between response partners. Few plans, particularly at the local level, reflect the integration of the burn system response.

Conclusion: The burn healthcare infrastructure in the US is constrained and therefore is particularly vulnerable to a BMCI. Emergency responders should preemptively examine their plans and systems to specifically integrate the burn care and response infrastructure.

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Role of General Practice Led Observation Ward to Support Emergency Ward to Improve Health Outcomes at a Major Kathmandu Hospital in Nepal

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Introduction: Tribhuvan University Teaching Hospital (TUTH) is a tertiary care hospital in Kathmandu. The emergency department sees between 130 to 140 cases per day.

These patients get initial evaluation and basic investigation for acute emergency management and treatment. Those requiring further treatment are then admitted to the department of General Practice for post emergency care which acts as an observation ward. This step allows for the patients to be observed on a short-term basis and permits patient monitoring and/or treatment for an initial 24–48 hour period and up to a maximum of five days. These steps allow for focused follow up, improved efficiency and minimizes inappropriate admissions to other hospital inpatient wards. This paper evaluates functionality, admission criteria, patient categorization and subspecialty referral to specialty patient care, discharge criteria and cost effectiveness.

Method: A descriptive observational study was carried out of the patients admitted to the observational ward between 2020–2021.

Results: Most articles suggest these wards improve patient satisfaction and clinical care, decrease length of stay, reduce unnecessary inpatient hospital admissions and are useful in fever under evaluations, COPD, poisoning, pneumonia, mild head injuries, high sugar, hypertension, gastroenteritis etc. Around 14% of patients were sent to the observation ward after acute emergency care. 84% were discharged from observation ward with a mean stay of three days and were followed up in community care or GP OPD. Nine percent were admitted to hospital wards, and 7% transferred to yellow/red area emergencies for derange vitals.

Conclusion: Observation wards seem to have advantages, excluding those who will inevitably need longer treatment, reduces cost savings and unnecessary burden of hospital admission.

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Quality Improvement Project: Optimizing Compliance with NICE CG176 Head Injury CT Time Standards at Wexford General Hospital Emergency Department

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Introduction: Head trauma is a high-risk presentation to the emergency department (ED). Preventing secondary brain injury through earlier diagnosis and intervention relies on timely access to head CT. Wexford General Hospital (WGH) ED uses NICE guidelines, which recommend specific timeframes for acquiring CT in head trauma. Following an audit demonstrating low compliance to NICE CG176 time standards in

2020 (34%), a quality improvement project was undertaken to optimize imaging pathways for head trauma.

Method: 94 head trauma CT scans were analyzed over a two-month period (June 14, 2022–August 14, 2022) from the NIMIS and IPMS databases to establish current time compliance and median wait times for CT.

Following the implementation of a head injury assessment proforma at triage to prompt earlier evaluation of high-risk head injuries, 108 head trauma CT's were reviewed over a two-month period (August 15, 2022–October 15, 2022) to determine if these parameters improved.

Unpaired, two-tailed Mann-Whitney's test was used to compare median wait times from triage to CT. Two-tailed Chi-square test was used to compare overall compliance rates.

Results: Overall ED compliance to NICE time standards improved following implementation of the proforma (43% vs. 36%, $p=0.401$).

For CT scans that were indicated within one hour, there was a statistically significant decrease in median wait time from triage to CT (134mins vs. 186mins, $p=0.046$). There was also a decrease in median wait time for scans indicated within 8 hours; however, this did not reach the threshold for statistical significance (216mins vs. 275mins, $p=0.230$).

Conclusion: Although there was an overall reduction in wait times for CT, this did not translate to a significant improvement in compliance rates to NICE CG176 time standards. This suggests that, despite earlier identification of these high-risk head injuries at triage, other systemic barriers to obtaining head CT are present and warrant further investigation.

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From Crisis to Challenges: The Use of ECMO During COVID-19 Outbreak in Israel

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Introduction: The use of ECMO devices began about 50 years ago. The purpose of the ECMO device is to enable gas exchange (oxygen and carbon dioxide) and/or hemodynamic support in situations of pulmonary or heart failure to recover or to serve as a bridge in a waiting period for heart pulmonary, heart, or artificial heart transplantation. The COVID-19 outbreak increased the need for the use of ECMO as a life-saving treatment. As a result, there was an increasing demand for qualified personnel in overloaded hospitals' ICUs to care for COVID-19 patients in general, specifically for those who required ECMO treatment. These required rapid team training and new methodology development collaboration between the Ministry of Health (MOH), multi-disciplinary teams, and a national professional committee that set the treatment protocols based on universal standards.

Method: A professional national committee was appointed by the MoH. The committee included Physicians, Nurses, Cardiopulmonary Bypass Machine Operators/Perfusionists as well as MoH representatives. The role of the committee was to

establish guidelines and standards for operating ECMO services. These guidelines were adopted by the MoH and are the basic recommendations for operating ECMO units in Israeli hospitals.

Results: The whole process had a dual challenge. One challenge was establishing new ECMO units according to the guidelines and the universal standards created by the committee. The other challenge was to motivate the old and experienced ECMO units to adopt and work according to the official standards set by the committee.

Conclusion: These days the committee started the evaluation of the old ECMO Units to bring all ECMO units in Israel to work by the same guidelines and standards.

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Community-Based Response to Pandemic: Case Study of Home Isolation Center using Flexible Surge Capacity

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Introduction: The SARS-CoV-2 virus 2019 (COVID-19) has consumed many available resources within contingency plans, necessitating new capacity surges and novel approaches. This study aimed to explore the possibility of implementing the Flexible Surge Capacity concept in relieving hospitals by focusing on the community resources to develop "Home Isolation Centers" in Bangkok, Thailand.

Method: This is a qualitative study consisting of observational and semi-structured interview data. The development and activities of Home Isolation Centers were observed, and interviews were conducted with leaders and operational workforces. Data