Revving up Readiness

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Summary: The Australian Medical Assistance Team (AUSMAT), a World Health Organization-verified Emergency Medical Team Type 2, provides rapid response capabilities for domestic and international health emergencies on behalf of the Australian Government. In the Northern Territory (NT), operational and administrative AUSMAT headquarters, personnel gain practical experience with operational procedures and equipment through engagement in local major events, where they serve as the advanced medical support team in conjunction with NT Health and local ambulance services. These often include high-velocity motor sports, which present substantial risks for severe injury and fatalities, necessitating advanced medical readiness.

The Strategic Events and Clinical Workforce team at the National Critical Care and Trauma Response Centre (NCCTRC) oversees the management and preparation of the equipment and team for the event. This preparation includes overseeing inventory, procurement, and medical consumables, as well as conducting "just-in-time training" and scenario-based simulation. AUSMAT members who have completed the requisite training are invited to participate in this initiative through an expression of interest process.

Participation in these major events enables AUSMAT members to refresh their familiarity with medical equipment, operational policies, and current clinical guidelines. Additionally, this engagement enhances the operational readiness and efficiency of the AUSMAT deployment cache and capability, ensuring the teams remain equipped, prepared, and ready for future events.

Participating as a member of the medical team for the NT Major events is an opportunity to develop collaborative relationships with local health services and enhance team cohesion. This participation also enhances the operational capability and visibility of the NCCTRC/AUSMAT, providing a competitive and valuable training platform for AUSMAT deployment readiness.

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Dual Disaster Dynamics: Assessing the Influence of COVID-19 on Emergency Incident Patterns

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Introduction: Pandemics, unlike other disasters, extend over prolonged periods, requiring continuous responses from both public and private sectors. The term "dual disaster" describes the occurrence of a pandemic alongside other emergencies. However, little research has explored how COVID-19 impacted non-pandemic emergencies.

Methods: This study analyzed emergency data from Taiwan's Emergency Medical Resources Management System (EMRMS) between 2018 and 2023. EMRMS is a web-based platform where hospitals report details such as date, age, sex, transport mode, triage level, disposition, and diagnosis during emergencies. We examined COVID-19-related policies from 2020 to 2023, categorizing them into four phases: Imported COVID (IC), Regional Epidemic (RE), Regulatory Relaxation (RR), and Extensive Community Transmission (ERT). Pre-pandemic data served as the non-COVID (NC) baseline. To compare emergency trends, annualized emergency rates were calculated for each phase, and casualty data, including triage levels, ICU needs, and mortality, were reviewed.

Results: A total of 734 emergencies involving 6,734 casualties were reported. The annualized emergency incidences were 172.8 (NC), 154.8 (IC), 85.9 (RE), 78.2 (RR), and 105.2 (ERT). Emergencies declined during the pandemic phases, though the proportion of patients transported by EMS remained stable. However, casualty severity increased, with more ICU admissions, surgeries, and deaths observed.

Conclusion: COVID-19 shifted emergency patterns, reducing incidence but increasing severity. Infection control and crowd management lowered emergency numbers, but resource-limited periods heightened the burden on healthcare systems. Preparedness for severe emergencies remains critical in dual disaster scenarios.

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Health Care Utilization Prediction Models and Tools During Mass Gathering Events: A Scoping Review

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Introduction: The ability to estimate healthcare utilization during mass gathering events can tremendously impact local healthcare resources and the cost of organizing such events. Various prediction models have been proposed in the literature to assist event organizers in forecasting medical service demands. This study will examine the extent and type of evidence regarding prediction modules and variables for healthcare utilization at various mass gatherings (MG) events.

Methods: The study included a search of four electronic databases (MEDLINE, EMBASE, Cochrane Library, and SCOPUS). Limits include the literature published on or after January 1, 2003. All retrieved citations looked at prediction models and variables of medical usage at all types of mass gathering events across all demographics, planned or spontaneous, that reported patient presentation rate (PPR) and/or transport to hospital rate (TTHR) at the event. All literature review articles were excluded.

Results: This scoping review analyzed 25 studies. Thirteen studies focused on prediction models for medical usage rates in MG, and 12 studies explored predictive variables for PPR in MG.

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