

French-speaking civil universities but also with the Royal Military School for the practical part.

Method: Collaboration agreements were established between three civilian universities (ULB, UCLouvain, ULiège) and the Royal Military School. The army thus provides the infrastructures of the Belgian military units to organize the exercises, personnel, means of make-up, vehicles, and security, all free of cost. Coordination meetings before exercises are also organized during the year by the army.

Results: The exercises are organized in complete safety conditions on military fields, isolated from the civilian environment without disturbing the daily functioning of civilians. Access is authorized and organized for the various disciplines (firefighters, police, red cross and other participants). Nearly 100 people (victims, firemen, policemen,...) and 50 vehicles per exercise make the scenario completely believable. Different scenarios are repeated six times to complete the training of 80 students.

Conclusion: The collaboration between civilians and military has made it possible to set up quality training integrating a large part of life-size exercises at no cost and in complete safety. This ends the course by integrating in practice all the knowledge learned during the theoretical part and the virtual exercises.

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Framework for Implementing and Measuring Interoperability and Organizational Change Within and Across a Multi-service and Multi-agency Emergency Response System

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Introduction: The Australian Capital Territory Emergency Services Agency (ESA) has experienced a significantly increased burden of training and most significantly recurrent major emergency response events correlated with increased bushfire and extreme weather events since 2019. ACT ESA is required to provide comprehensive pre-hospital paramedic, firefighting, and emergency response support to the population of the Australian Capital Territory on a day-by-day basis (business as usual) but also surge to meet extraordinary demand. Historically, operational roles and functional areas within ACT ESA have worked largely autonomously under business-as-usual conditions. Under crisis or disaster conditions, these sub-agencies are required to work harmoniously together and alongside external agencies such as Australian Defense Force and Australian Federal Police. ACT ESA have identified that interoperability and integration between internal ACT ESA sub-agencies and externally with other agencies is a key problem. From 2023–2027 ACT ESA has committed to a program of organizational change to address this problem.

Method: An organizational change plan focusing on improving interoperability and integration was developed using the Generalized Method for Measuring Interoperability and Continuous Quality Improvement frameworks. A comprehensive framework for measuring organizational change and the effectiveness of interventions across multiple workplace domains, based on Kirkpatrick's approach, was developed through a co-design process between academia and the ACT ESA.

Results: The ACT ESA change management framework, research, and implementation plan is presented here, alongside the results of preliminary stakeholder and professional engagement activities providing early feedback, adjustment and evolution.

Conclusion: The ACT ESA is in a unique position within the Australian emergency response landscape having a much greater degree of centralized command, control, and coordination. Despite this advantage, it has identified interoperability both within the organization and with key partnering organizations as a problem. This study outlines how the ESA is approaching organizational change by applying systematic implementation and change management approaches.

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International Military Response to the COVID-19 Pandemic: A Literature Review

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Introduction: The COVID-19 pandemic created a public health crisis worldwide. Healthcare workers also became ill at a time when hospitals were overwhelmed with patients, leaving critical staffing shortages. Mass vaccination efforts were initiated in some cases without adequate civilian manpower. The governments of many nations utilized their military assets to fill gaps in care, and to initiate projects promoting public health efforts. The COVID-19 pandemic created a never-before-seen international military response to an infectious disease disaster. This literature review highlights the non-conflict assets allocated, abilities utilized, projects completed, overall effectiveness, and lessons learned by the military community worldwide to support their local populace. By collating this information into a single document, the collective global experience can be better analyzed and this information utilized to develop a framework for future disaster preparedness and mitigation planning efforts.

Method: Medline (PubMed), GoogleScholar and the JSTOR Security Studies collection were searched for English language articles from January 1, 2020 and onwards. Keywords used included civil-military coordination, hospital, deployment, COVID-19, vaccination, and healthcare. Titles were initially screened for relevance and the abstracts were then reviewed for a decision on inclusion. Article inclusion was determined

by author consensus based on relevance to the objectives. Key papers were also hand searched for additional unidentified references.

Results: Data collection and analysis planned for completion by January 2023.

Conclusion: The COVID-19 pandemic created a huge need for manpower which was backfilled by militaries around the world. This literature search demonstrates how military resources were able to contribute to the pandemic response, including successes and opportunities for future improvement.

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Quantitative Analysis of United States National Guard COVID-19 Disaster Relief Activities April–June 2020

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Introduction: The COVID-19 pandemic provided a unique opportunity for the United States National Guard (NG) to assist in an infectious disease disaster. This study aims to interpret data from NG situation reports (SITREPS) given to the National Guard Bureau (NGB) by each state national guard headquarters regarding their relief efforts from April to June 2020. This is the first published study about NG disaster relief utilizing quantitative data provided by the US military.

Method: The SITREPS of all 50 states, the District of Columbia, Guam, Puerto Rico, and the US Virgin Islands are available for the dates of April 10, May 6, May 16, and June 3, 2020 through a NG website that requires government level access. These were examined to evaluate and analyze the activities directed by each state NG headquarters as part of COVID-19 response efforts. No other dates were available for analysis.

Results: During the COVID-19 pandemic, the NG primarily provided security, tested for COVID-19, ran COVID-19 shelters, assisted foodbanks, delivered meals, provided transportation services, aided mortuaries, supported protective equipment warehouses, and deployed medical personnel to cover hospital shortages. They provided services to children, homeless persons, residents of skilled nursing facilities, and Native Americans living on tribal lands. Service members (SM) sewed masks, provided translation services, and cooked in prison kitchens. All state NGs participated in COVID-19 relief to varying degrees. Numerical data about the services provided such as quantity was rare but is included as available.

Conclusion: The United States National Guard provided a wide variety of services through activation of its service men and women that impacted COVID-19 response throughout all states and territories. This elucidation of the uses of the

National Guard should be considered during future governmental disaster preparedness planning efforts, and can be extrapolated to international military disaster relief.

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CBRN Disaster Hospital Response and Preparedness. An Italian Civilian Military Cooperation Teaching Model

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Introduction: Chemical, Biological, Radiological, and Nuclear (CBRN) emergencies need specific hospital preparedness and resource availability.

Preparing to evaluate and manage victims from CBRN exposure events in one aspect of hospital preparedness, is often underestimated. Specific skills and capabilities are required to manage these events. Emergency department (ED) and hospital staff need adequate training to provide safe and effective care.

Method: The Hospital Complex of Valtellina and Alto Lario (with three hospitals), in consideration of the geographic location amid mountains, far from urban hospital centers, decided to develop an intensive training program for the hospital emergency staff. Firstly, it was based on an eight-hour initial training program, using a combined civilian military approach that included hazard recognition, substance identification, site safety, response roles, PPE use, and decontamination procedures. The CBRN Operational Unit (for prevention of chemical-biological-radiological-nuclear risks) of the 1st Territorial Unit of the Auxiliary Military Corps of the Order of Malta Italy led such training session showing that a military approach to CBRN threats can be used with civilian and military competencies and tools in managing specific hazardous events hospital first responders may face.

Results: A drill exercise was performed on a radiological fall-out incident to test the hospital's emergency response staff preparedness. Hospital management and decontamination procedures were analyzed to treat victims as well as first responders and to train hospital staff with few resources available.

Conclusion: Hospitals need a specific level of preparedness to enable an effective response to CBRN emergencies. Skills and competencies of military personnel can be a resource in these kinds of events to train civilian personnel who are not normally acquainted to or confident to manage this kind of CBRN events, and can represent a new model and challenge of inter-agency cooperation in the disaster management of complex emergencies involving hazardous materials.

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