

**Methods:** The applicability, modifications, as well as the usefulness of the U.S.-originated HICS system in Turkish, South Korean, and Greek hospitals were studied. The response of hospital staff in exercises when >20 patients arrive at the emergency department at the same time also was studied. The experiences of providers, medical response provided for the injured following a terrorist attack, scenarios used in different exercises, and overall response systems in these three countries also were evaluated. The presence of similar responses given for similar threats were documented. Within the three nations, the areas studied included: (1) medical response systems against terrorism; (2) scenarios and/or systems about the medical response to a chemical accident or terrorist attack; and (3) medical response systems for nuclear accidents or terrorism.

**Results:** After comparing the results, the differences in response and possible gains following studies that could be done by study groups were identified.

**Conclusion:** Synergistic messages about our observations of disaster medical response experiences in hospitals in Turkey, South Korea, Greece, and the US also have been identified.

**Keywords:** disaster medical response; Greece; Hospital Incident Command System terrorism; South Korea; Turkey

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### Experiences with Frozen Blood Products in the Netherlands Military

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**Introduction:** During peace-keeping and peace-enforcing missions abroad, the Netherlands Armed Forces uses deep frozen blood products stored at -80°C. This study was initiated to validate the quality of the frozen and subsequently thawed products both in the Netherlands and at the site of administration, with special attention to quality control and compliance with (inter)national regulations and guidelines.

**Methods:** Leukodepleted red cell concentrates were glycerolized using the automated cell processor, ACP215, and frozen to -80°C. After thawing, the units were deglycerolized both in the Netherlands and in Iraq using the ACP215, and stored in Nutricel rejuvenating (AS-3) solution for two weeks at 4°C. Leukodepleted fresh frozen plasma units were thawed after release from quarantine, repacked, and frozen to -80°C. Prior to and after the -80°C freezing, concentration of factors V and VIII was determined. Dimethyl Sulfoxide (DMSO) was added to leukodepleted, plateletpheresis units to a final concentration of approximately 5%. The platelets were concentrated and frozen to -80°C. After thawing, the platelets were suspended in thawed deep frozen plasma (DFP) and the platelet count and pH were determined.

**Results:** The quality of blood products, frozen and thawed in the manner described, is in compliance with the European and US guidelines for standard red cell concentrates, plasma, and platelets.

**Conclusions:** A frozen blood bank facility with a stock of frozen, universal, donor blood products can easily, effectively, and safely be used in remote areas, to compensate for periods when few or no donors are available, when the

resupply of blood is impaired and/or when many patients are suddenly in need of blood products.

**Keywords:** armed forces; frozen blood products; The Netherlands; product standards; quality control

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### Session 6: Planning 1

*Chairs: TBA*

#### Relationship between Transformational Leadership and the Organizational Performance of Hospital-Based Disaster Coordinators Using the Multifactor Leadership Questionnaire

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**Objectives:** The United States National Response Plan is rooted in the perspective that disaster preparedness is the responsibility of all jurisdictional levels, from federal to local. The purpose of this study was to assess the leadership styles of the local hospital disaster coordinators in Louisiana who activated their response system and interfaced with other jurisdictional systems during Hurricanes Katrina and Rita.

**Methods:** Hospital performance was assessed to explore its relation to leadership style. Index cases were identified under the National Hospital Bioterrorism Preparedness Program. The analysis included three groups: (1) Designated Regional Coordinators (n = 22); (2) Designated Hospital Coordinators at acute-care facilities (n = 73); and (3) Designated Hospital Coordinators at non-acute care facilities (n = 40). The survey tools were: (1) the Multifactor Leadership Questionnaire; and (2) the Emergency Preparedness Indicator survey. Hospital contexts (i.e., profit structure and licensed bed size) were assessed to explore the potential moderating effects of the relationship of leadership style to performance scores.

**Results:** Transformational leadership had a positive association with hospital performance scores. No significant moderating effects were found, which indicated that the coordinators had similar leadership styles not only between hospitals, but across the statewide hospital response system.

**Conclusion:** The results of this study offers the field of hospital disaster preparedness a benchmark for other programs that support the development of leadership skills at the local level. Implications, limitations, and future studies for leadership research in disaster planning are discussed.

**Keywords:** disaster coordinators; hospital; leadership; organization; preparedness; relationship; questionnaire

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#### Surge Capacity: A Conceptual Framework for Disaster Preparedness and the Need for Reassessment and Research to Develop Readiness Benchmarks

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**Background:** Surge capacity is defined as the ability of a healthcare system to respond to a sudden increase in