

arena. The partnership between these three organizations does remain intact with formal memorandums of agreement now existing. They continue to work together in the community and jointly respond to regional disasters.

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(A271) Building Resilient Healthcare Systems during Natural Disasters — Impacts of the 2007 Tulsa, Oklahoma Ice Storm

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On the evening of 07 December 2007, an ice storm occurred in the south central United States, causing severe power outages in Tulsa, Oklahoma, and leaving > 900,000 people without power for up to three weeks. Eighteen states contributed power workers to restore functioning power over a three-week period. Cleanup of debris from fallen trees took an additional five months. Hospitals and other healthcare facilities are considered to be critical infrastructure facilities in the community. During this storm, five of the six tertiary care hospitals lost power. In these hospitals, the internal telephone systems failed, internal suctioning systems failed, and the internal oxygen system failed. Water treatment plants were without power for 48 hours. Nursing home patients were discharged to homes or transferred to hospitals, as nursing homes tried to function without power for heating, patient monitoring devices, or cooking. Communication for these outlying care facilities was disrupted by the storm damage. Hospital emergency departments that had power became havens as they had heat, communication, water, and even warm food. Multiple patients with injuries due to cleaning up tree debris, falls, and carbon monoxide poisoning from ill-advised efforts to heat dwellings were seen in these emergency departments. Ambulance services had fuel shortages early in the course of the ice storm due to the inability to pump fuel (electrically operated pumps initially were non-functional). Three standards of care were altered for prehospital responders. This paper explains the efforts taken to mitigate future calamities, based on the lessons learned from this event.

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(A272) Socioeconomic Impact of “Hurricane Karl” on Health Facilities in Veracruz, Mexico with a Population of 7 Million 600 Thousand in September 2010

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Socioeconomic impact of “Hurricane Karl” on health facilities in Veracruz, Mexico with a population of 7 million 600 thousand in September 2010 Summary Hurricane Karl, thirteenth tropical cyclone of the season in the Atlantic hurricane of 2010, originated in the Caribbean Sea and slammed into the Yucatan Peninsula as a strong tropical storm, to emerge into the Gulf of Mexico where it gradually reorganized to achieve Category 3 (major hurricane)

on the Saffir–Simpson scale and hit the east coast of Mexico on September 17th of 2010. Preparations On September 16th, the Federal Government, Federal Electricity Commission, Laguna Verde Nuclear Power Plants, The Ministry of National Defense, The Ministry of Marine Affairs and human elements and materials deployed for relief to the population. The health sector also was prepared to take appropriate measures under the concept of Safe Hospital PAHO / WHO. Impact In the state of Veracruz (more than 7 million 600 thousand habitants), Hurricane Karl arrived around 11:30 am on September 17th to 15 km north of the port of Veracruz reaching a capacity of 195 km per hour. Torrential rains flooded the streets of the phenomenon and avenues of the historic center of the port, the water reached 40 centimeters to 1 meter in height, to the south of the state and surrounding areas reached 2 meters in height. Caused serious damage since its inception in health infrastructure, such as suspension of public services, damage to the distribution system of drinking water, broken windows and flooding of a hospital as well as several units of Family Medicine.

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(A273) Mass Gatherings and the Application of the New International Risk Management Standard ISO3100

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Background: Early involvement by health services in the planning, preparation, operations and post-event analysis of mass gatherings provides one of the best opportunities to engage with other agencies and to develop a real sense of your agency’s capabilities. The establishment of the new ISO Standards on Risk Management provide the best opportunity in a decade to structure this work in a manner that will develop true capacity to manage the multitude of risks health services face this century.

Discussion: Rather than ad hoc and sometimes conflicting approaches we now have the “lingua franca” on which to build our policy, capacity development, budgets and response. The evolution of risk management standards has seen the release of ISO 31000: 2009, Risk management – Principles and guidelines and ISO 31010: 2009, Risk management – Risk assessment techniques. Largely based on the earlier Australian Standard 4360 and work of the IEC these standards have the potential to embed critical aspects of the responsibilities of health agencies worldwide into a universal singular policy framework. Translating this into other areas of health agencies work includes communicable disease management and emergency management, in general, which will allow other agencies to understand the “health” perspective and vice versa.

Conclusions: Drawing on personal experiences from mass gatherings since 1997, the author will demonstrate the utility of the ISO Standards as the framework for health emergency management including mass gatherings. Examples will include mass gatherings at the international level within the Asia-Pacific Region to the local level within Sydney, Australia from 1997 to 2010.

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